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* * * * * Welcome to STN International * * * * *

| | | | |
|------|----|--------|--|
| NEWS | 1 | | Web Page for STN Seminar Schedule - N. America |
| NEWS | 2 | AUG 06 | CAS REGISTRY enhanced with new experimental property tags |
| NEWS | 3 | AUG 06 | FSTA enhanced with new thesaurus edition |
| NEWS | 4 | AUG 13 | CA/CAPplus enhanced with additional kind codes for granted patents |
| NEWS | 5 | AUG 20 | CA/CAPplus enhanced with CAS indexing in pre-1907 records |
| NEWS | 6 | AUG 27 | Full-text patent databases enhanced with predefined patent family display formats from INPADOCDB |
| NEWS | 7 | AUG 27 | USPATOLD now available on STN |
| NEWS | 8 | AUG 28 | CAS REGISTRY enhanced with additional experimental spectral property data |
| NEWS | 9 | SEP 07 | STN AnaVist, Version 2.0, now available with Derwent World Patents Index |
| NEWS | 10 | SEP 13 | FORIS renamed to SOFIS |
| NEWS | 11 | SEP 13 | INPADOCDB enhanced with monthly SDI frequency |
| NEWS | 12 | SEP 17 | CA/CAPplus enhanced with printed CA page images from 1967-1998 |
| NEWS | 13 | SEP 17 | CAPplus coverage extended to include traditional medicine patents |
| NEWS | 14 | SEP 24 | EMBASE, EMBAL, and LEMBASE reloaded with enhancements |
| NEWS | 15 | OCT 02 | CA/CAPplus enhanced with pre-1907 records from Chemisches Zentralblatt |
| NEWS | 16 | OCT 19 | BEILSTEIN updated with new compounds |
| NEWS | 17 | NOV 15 | Derwent Indian patent publication number format enhanced |
| NEWS | 18 | NOV 19 | WPIX enhanced with XML display format |
| NEWS | 19 | NOV 30 | ICSD reloaded with enhancements |
| NEWS | 20 | DEC 04 | LINPADOCDB now available on STN |
| NEWS | 21 | DEC 14 | BEILSTEIN pricing structure to change |
| NEWS | 22 | DEC 17 | USPATOLD added to additional database clusters |
| NEWS | 23 | DEC 17 | IMSDRUGCONF removed from database clusters and STN |
| NEWS | 24 | DEC 17 | DGENE now includes more than 10 million sequences |
| NEWS | 25 | DEC 17 | TOXCENTER enhanced with 2008 MeSH vocabulary in MEDLINE segment |
| NEWS | 26 | DEC 17 | MEDLINE and LMEDLINE updated with 2008 MeSH vocabulary |
| NEWS | 27 | DEC 17 | CA/CAPplus enhanced with new custom IPC display formats |
| NEWS | 28 | DEC 17 | STN Viewer enhanced with full-text patent content from USPATOLD |
| NEWS | 29 | JAN 02 | STN pricing information for 2008 now available |
| NEWS | 30 | JAN 16 | CAS patent coverage enhanced to include exemplified prophetic substances |
| NEWS | 31 | JAN 28 | USPATFULL, USPAT2, and USPATOLD enhanced with new custom IPC display formats |
| NEWS | 32 | JAN 28 | MARPAT searching enhanced |
| NEWS | 33 | JAN 28 | USGENE now provides USPTO sequence data within 3 days of publication |
| NEWS | 34 | JAN 28 | TOXCENTER enhanced with reloaded MEDLINE segment |

NEWS 35 JAN 28 MEDLINE and LMEDLINE reloaded with enhancements
NEWS 36 FEB 08 STN Express, Version 8.3, now available
NEWS 37 FEB 20 PCI now available as a replacement to DPCI

NEWS EXPRESS FEBRUARY 08 CURRENT WINDOWS VERSION IS V8.3,
AND CURRENT DISCOVER FILE IS DATED 20 FEBRUARY 2008

NEWS HOURS STN Operating Hours Plus Help Desk Availability
NEWS LOGIN Welcome Banner and News Items
NEWS IPC8 For general information regarding STN implementation of IPC 8

Enter NEWS followed by the item number or name to see news on that specific topic.

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* * * * * STN Columbus * * * * *

FILE 'HOME' ENTERED AT 14:01:05 ON 22 FEB 2008

| | | |
|----------------------|------------|---------|
| => file registry | | |
| COST IN U.S. DOLLARS | SINCE FILE | TOTAL |
| | ENTRY | SESSION |
| FULL ESTIMATED COST | 0.21 | 0.21 |

FILE 'REGISTRY' ENTERED AT 14:01:16 ON 22 FEB 2008
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STRUCTURE FILE UPDATES: 21 FEB 2008 HIGHEST RN 1005032-28-9
DICTIONARY FILE UPDATES: 21 FEB 2008 HIGHEST RN 1005032-28-9

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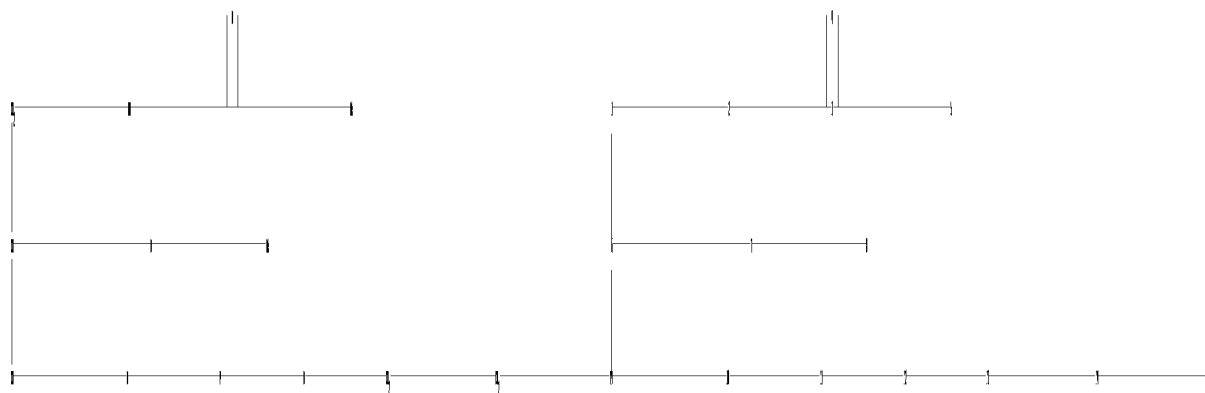
TSCA INFORMATION NOW CURRENT THROUGH January 9, 2008.

Please note that search-term pricing does apply when conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

<http://www.cas.org/support/stngen/stndoc/properties.html>

=>
Uploading C:\Program Files\Stnexp\Queries\10781894.str



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chain nodes :
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chain bonds :
1-2  1-6  2-3  3-4  3-5  6-7  6-9  7-8  9-10  10-11  11-12  12-13  13-14  14-15
exact/norm bonds :
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exact bonds :
1-2  1-6  6-9  12-13  13-14  14-15

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Match level :
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10:CLASS 11:CLASS 12:CLASS 13:CLASS 14:CLASS 15:CLASS

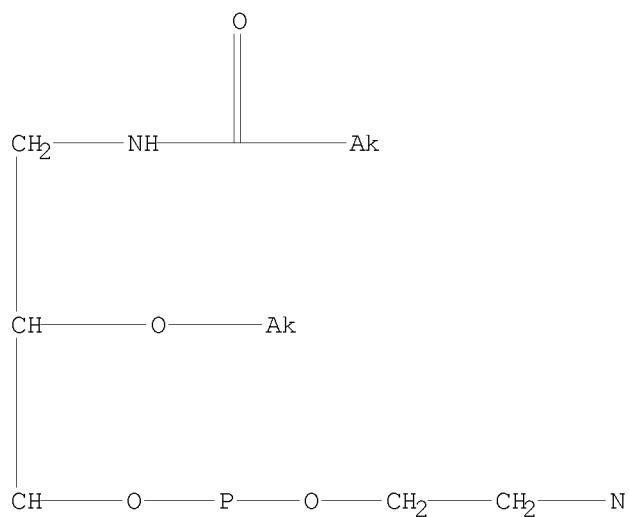
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L1 STRUCTURE UPLOADED

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L1 HAS NO ANSWERS

L1 STR



Structure attributes must be viewed using STN Express query preparation.

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=> s l1 full
FULL SEARCH INITIATED 14:01:33 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED -      4722 TO ITERATE

100.0% PROCESSED      4722 ITERATIONS      70 ANSWERS
SEARCH TIME: 00.00.01

L2      70 SEA SSS FUL L1

=> file medline caplus wpids uspatfull
COST IN U.S. DOLLARS      SINCE FILE      TOTAL
                        ENTRY      SESSION
FULL ESTIMATED COST      178.36      178.57

FILE 'MEDLINE' ENTERED AT 14:01:45 ON 22 FEB 2008

FILE 'CAPLUS' ENTERED AT 14:01:45 ON 22 FEB 2008
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FILE 'WPIDS' ENTERED AT 14:01:45 ON 22 FEB 2008
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FILE 'USPATFULL' ENTERED AT 14:01:45 ON 22 FEB 2008
CA INDEXING COPYRIGHT (C) 2008 AMERICAN CHEMICAL SOCIETY (ACS)

=> s l2
SAMPLE SEARCH INITIATED 14:01:49 FILE 'WPIDS'
SAMPLE SCREEN SEARCH COMPLETED -      13 TO ITERATE

100.0% PROCESSED      13 ITERATIONS      1 ANSWERS
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS:  ONLINE  **COMPLETE**
                        BATCH   **COMPLETE**
PROJECTED ITERATIONS:   22 TO      238
PROJECTED ANSWERS:      1 TO      40

L3      48 L2

=> s l3 and ?virus?
L4      23 L3 AND ?VIRUS?

=> s l4 and coronavirus or herpes or togavirus
L5      127186 L4 AND CORONAVIRUS OR HERPES OR TOGAVIRUS

=> s l4 and (coronavirus or herpes or togavirus)
L6      12 L4 AND (CORONAVIRUS OR HERPES OR TOGAVIRUS)

=> d l6 1-12 ibib, abs, hitstr

L6  ANSWER 1 OF 12  CAPLUS  COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER:      2005:904330  CAPLUS
DOCUMENT NUMBER:      143:222464
TITLE:      Phospholipids for the treatment of infection by
              togaviruses, herpes viruses
              and coronaviruses
INVENTOR(S):      Fleming, Ronald A.; Hes, Jan V.; Huang, Yunsheng;
                  Read, Russ H.; Morris-Natschke, Susan L.; Ishaq,

```

PATENT ASSIGNEE(S): Khalid S.; Kucera, Louis S.; Furman, Phillip A.
 SOURCE: Kucera Pharmaceutical Company, USA
 U.S. Pat. Appl. Publ., 36 pp.
 CODEN: USXXCO
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE | INSTANT APPLICATION |
|------------------------|------|----------|-----------------|----------|---------------------|
| US 2005187192 | A1 | 20050825 | US 2004-783927 | 20040220 | |
| PRIORITY APPLN. INFO.: | | | US 2004-783927 | 20040220 | |

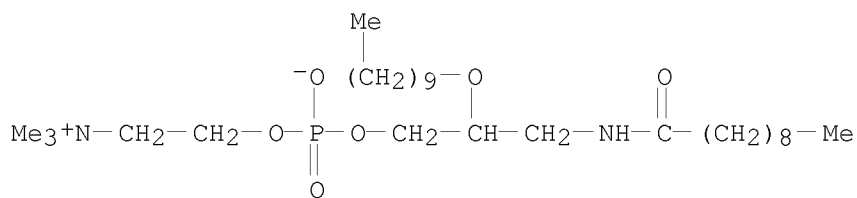
OTHER SOURCE(S): MARPAT 143:222464

AB Provided are compds., methods and pharmaceutical compns. for treating a host, especially a human, infected with a togavirus, herpes virus and/or coronavirus, and in particular SARS-CoV, cytomegalovirus or varicella-zoster virus. The method in one embodiment comprises administering to that host an effective amount of an anti-togavirus, anti-herpes virus and/or anti-coronavirus phospholipid or a pharmaceutically acceptable salt or prodrug thereof. The phospholipid compound is, e.g., a 3-alkylamido-2-alkoxypropylphosphocholine compound or salt thereof. The compound may be administered alone or in combination and/or alternation with one or more other antiviral agents. The EC50 of an alkylamido-2-alkoxypropylphosphocholine against varicella zoster virus was 0.48 µg/mL.

IT 252371-27-0 443882-90-4 443882-91-5
 RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (phospholipids for treatment of infection by togaviruses, herpes viruses and coronaviruses)

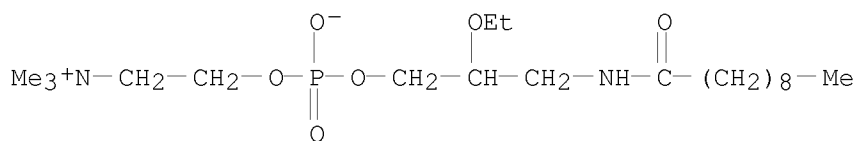
RN 252371-27-0 CAPLUS

CN 3,5-Dioxa-9-aza-4-phosphanadecan-1-aminium, 7-(decyloxy)-4-hydroxy-N,N,N-trimethyl-10-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



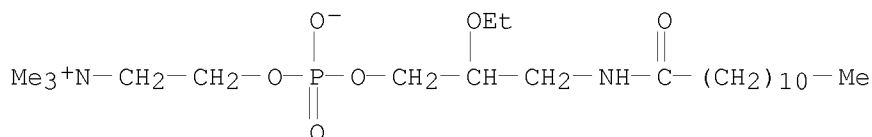
RN 443882-90-4 CAPLUS

CN 3,5-Dioxa-9-aza-4-phosphanadecan-1-aminium, 7-ethoxy-4-hydroxy-N,N,N-trimethyl-10-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



RN 443882-91-5 CAPLUS

CN 3,5-Dioxa-9-aza-4-phosphaheneicosan-1-aminium, 7-ethoxy-4-hydroxy-N,N,N-trimethyl-10-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



L6 ANSWER 2 OF 12 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1996:388263 CAPLUS

DOCUMENT NUMBER: 125:49273

TITLE: Lipid analogs for treating viral infections

INVENTOR(S): Kucera, Louis S.; Morris-Natschke, Susan L.; Ishaq, Khalid S.

PATENT ASSIGNEE(S): Wake Forest University, USA; Univ. of North Carolina at Chapel Hill

SOURCE: PCT Int. Appl., 53 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------------------|--|----------|-----------------|-------------|
| WO 9606620 | A2 | 19960307 | WO 1995-US10111 | 19950807 |
| WO 9606620 | A3 | 19960613 | | |
| W: | AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LT, LU, LV, MD, MG, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TT | | | |
| RW: | KE, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG | | | |
| CA 2197319 | A1 | 19960307 | CA 1995-2197319 | 19950807 |
| AU 9532166 | A | 19960322 | AU 1995-32166 | 19950807 |
| EP 781138 | A2 | 19970702 | EP 1995-928365 | 19950807 |
| R: | AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, NL, PT, SE | | | |
| JP 10506619 | T | 19980630 | JP 1995-508773 | 19950807 |
| EP 1852121 | A2 | 20071107 | EP 2007-16369 | 19950807 |
| EP 1852121 | A3 | 20071121 | | |
| R: | AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, NL, PT, SE | | | |
| US 5962437 | A | 19991005 | US 1997-793470 | 19970502 |
| US 7129227 | B1 | 20061031 | US 1999-412539 | 19991004 |
| US 2004259845 | A1 | 20041223 | US 2004-889127 | 20040713 |
| US 7135584 | B2 | 20061114 | | |
| US 2005080050 | A1 | 20050414 | US 2004-943923 | 20040920 |
| US 7141557 | B2 | 20061128 | | |
| JP 2007056033 | A | 20070308 | JP 2006-278049 | 20061011 |
| US 2007099870 | A1 | 20070503 | US 2006-588313 | 20061027 |
| US 7294621 | B2 | 20071113 | | |
| US 2007105811 | A1 | 20070510 | US 2006-588308 | 20061027 |
| US 7294619 | B2 | 20071113 | | |
| US 2007105812 | A1 | 20070510 | US 2006-588311 | 20061027 |
| US 7294620 | B2 | 20071113 | | |
| PRIORITY APPLN. INFO.: | | | US 1994-297416 | A 19940829 |
| | | | US 1994-314901 | A 19940929 |
| | | | EP 1995-928365 | A3 19950807 |
| | | | JP 1996-508773 | A3 19950807 |
| | | | WO 1995-US10111 | W 19950807 |
| | | | US 1997-793470 | A3 19970502 |

US 1999-412539 B1 19991004
 US 2004-889127 A3 20040713
 US 2004-943923 A3 20040920

OTHER SOURCE(S): MARPAT 125:49273

AB A method of treating viral infections, in particular with HIV-1, hepatitis B virus, and herpes viruses, is disclosed.
 The method comprising administering to a subject in need of such treatment an infection-combating amount of a phospholipid or phospholipid derivative For example, 1-dodecanamido-2-decylpropyl-3-phosphocholine showed IC50 value of 0.14 μ M against HIV-1 syncytial plaque formation.

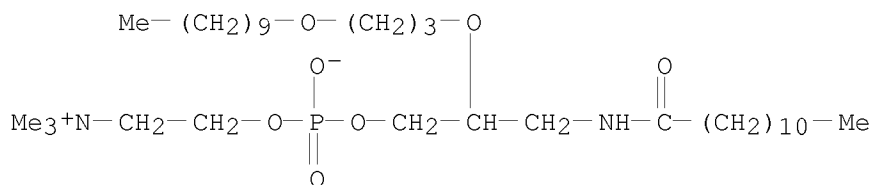
IT 178172-98-0 178172-99-1 178173-00-7
 178173-01-8

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(phospholipids for treating viral infections and tumors)

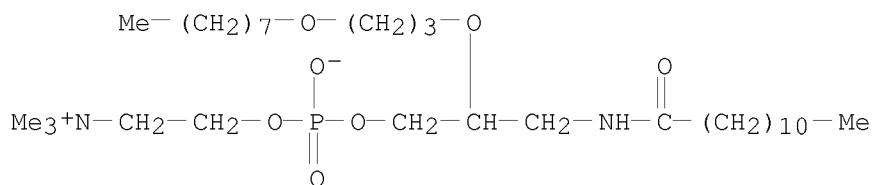
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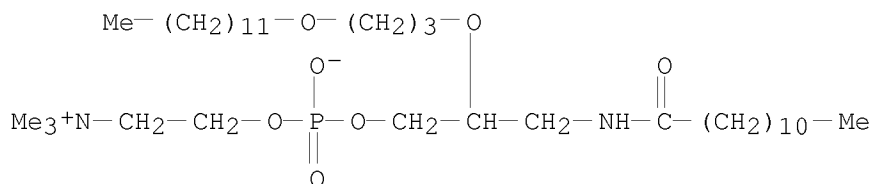
RN 178172-99-1 CAPLUS

CN 3,5-Dioxa-9-aza-4-phosphaheneicosan-1-aminium, 4-hydroxy-N,N,N-trimethyl-7-[3-(octyloxy)propoxy]-10-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



RN 178173-00-7 CAPLUS

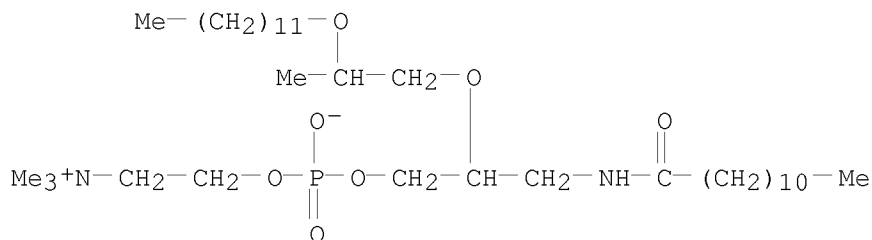
CN 3,5-Dioxa-9-aza-4-phosphaheneicosan-1-aminium, 7-[3-(dodecyloxy)propoxy]-4-hydroxy-N,N,N-trimethyl-10-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



RN 178173-01-8 CAPLUS

CN 3,5-Dioxa-9-aza-4-phosphaheneicosan-1-aminium, 7-[2-(dodecyloxy)propoxy]-4-

hydroxy-N,N,N-trimethyl-10-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



L6 ANSWER 3 OF 12 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1990:470710 CAPLUS

DOCUMENT NUMBER: 113:70710

TITLE: Novel membrane-interactive ether lipid analogs that inhibit infectious HIV-1 production and induce defective virus formation

AUTHOR(S): Kucera, Louis S.; Iyer, Nathan; Leake, Eva; Raben, Adam; Modest, Edward J.; Daniel, Larry W.; Piantadosi, Claude

CORPORATE SOURCE: Bowman Gray Sch. Med., Wake Forest Univ., Winston-Salem, NC, 27103, USA

SOURCE: AIDS Research and Human Retroviruses (1990), 6(4), 491-501

CODEN: ARHRE7; ISSN: 0889-2229

DOCUMENT TYPE: Journal

LANGUAGE: English

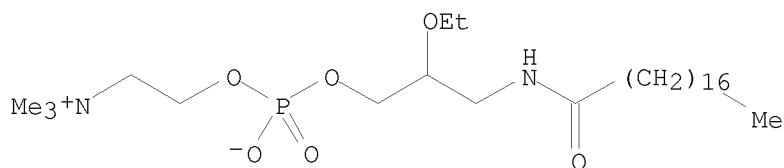
AB A new class of membrane-active ether lipid (EL) analogs of platelet-activating factor were studied for in vitro anti-HIV-1 activity. Human T-cell (CEM-ss) monolayers or suspension cultures were used to determine effects of structural modifications of Type A phosphorus-containing and Type B nonphosphorus EL analogs on (a) the inhibitory concn.50 (IC50) for HIV-1 syncytial plaque formation and cell growth, and, (b) virus budding at the cell plasma membrane. Results indicate that representative Type A and Type B EL inhibit HIV-1 but not herpes simplex virus type 2 plaque formation when added before or up to 2 days after viral infection. Anti-HIV-1 activity does not involve direct inactivation of virus infectivity. Type A EL (IC50 range = 0.2-1.4 μM) with alkoxy, alkylthio, or alkyamido substitution at glycerol position 1 and ethoxy or methoxy substitution at position 2, and Type B compds. (IC50 range = 0.33-0.63 μM) with an inverse choline or nitrogen heterocyclic substitution at position 3 have selective activity against HIV-1-infected T-cells. EL treatment of HIV-1-infected cells is associated with subsequent release of reverse transcriptase activity, but infectious virus production is inhibited with time after infection. Electron microscopic examination of HIV-1-infected and EL-treated cells revealed absence of detectable budding virus at the plasma membrane but presence of intracytoplasmic vacuolar virus particles. EL analogs are a novel class of agents that induce defective intracytoplasmic vacuolar HIV-1 formation in T-cells. Being membrane interactive, EL are ideally suited for combination chemotherapy with DNA-interactive anti-HIV nucleoside analogs.

IT 112989-02-3

RL: BIOL (Biological study)
(human immunodeficiency virus infection response to)

RN 112989-02-3 CAPLUS

CN 3,5-Dioxa-9-aza-4-phosphaheptacosan-1-aminium, 7-ethoxy-4-hydroxy-N,N,N-trimethyl-10-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



L6 ANSWER 4 OF 12 USPATFULL on STN

ACCESSION NUMBER: 2007:121606 USPATFULL
 TITLE: Lipid analogs for inhibiting HIV-1 activity
 INVENTOR(S): Kucera, Louis S., Pfafftown, NC, UNITED STATES
 Morris-Natschke, Susan L., Apex, NC, UNITED STATES
 Ishaq, Khalid S., Chapel Hill, NC, UNITED STATES
 PATENT ASSIGNEE(S): Wake Forest University (U.S. corporation)

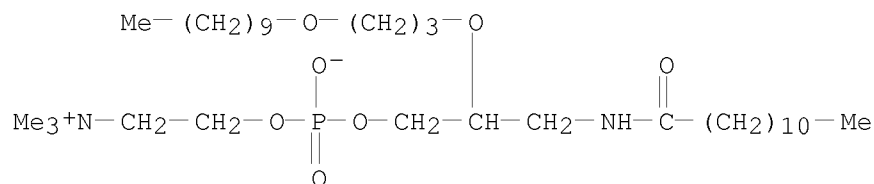
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| PATENT INFORMATION: | US 2007105812 | A1 | 20070510 |
| | US 7294620 | B2 | 20071113 |
| APPLICATION INFO.: | US 2006-588311 | A1 | 20061027 (11) |
| RELATED APPLN. INFO.: | Division of Ser. No. US 1999-412539, filed on 4 Oct 1999, GRANTED, Pat. No. US 7129227 Division of Ser. No. US 1997-793470, filed on 2 May 1997, GRANTED, Pat. No. US 5962437 Continuation of Ser. No. US 1994-314901, filed on 29 Sep 1994, ABANDONED Continuation-in-part of Ser. No. US 1994-297416, filed on 29 Aug 1994, ABANDONED | | |
| DOCUMENT TYPE: | Utility | | |
| FILE SEGMENT: | APPLICATION | | |
| LEGAL REPRESENTATIVE: | MORGAN LEWIS & BOCKIUS LLP, 1111 PENNSYLVANIA AVENUE NW, WASHINGTON, DC, 20004, US | | |
| NUMBER OF CLAIMS: | 18 | | |
| EXEMPLARY CLAIM: | 1-106 | | |
| LINE COUNT: | 898 | | |

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The invention relates to methods of treating viral infections, and in particular hepatitis B virus. The method comprises administering to a subject in need of such treatment an infection-controlling amount of a phospholipid or phospholipid derivative to inhibit the activity of the viral infection.

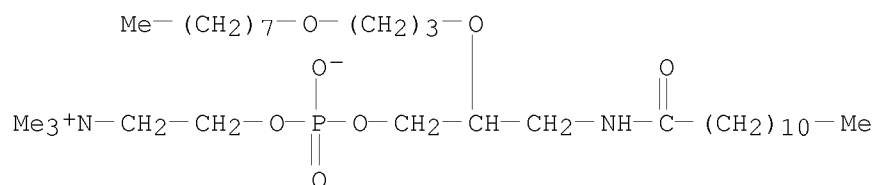
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 178172-98-0 178172-99-1 178173-00-7
 178173-01-8
 (phospholipids for treating viral infections and tumors)
 RN 178172-98-0 USPATFULL
 CN 3,5-Dioxa-9-aza-4-phosphaheneicosan-1-aminium, 7-[3-(decyloxy)propoxy]-4-hydroxy-N,N,N-trimethyl-10-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



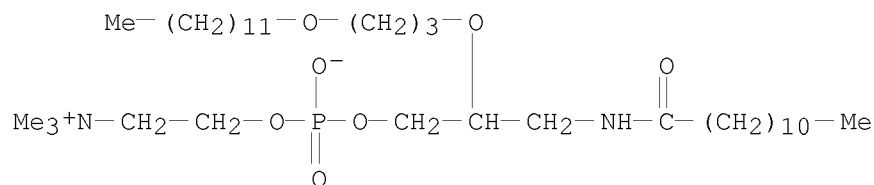
RN 178172-99-1 USPATFULL

CN 3,5-Dioxa-9-aza-4-phosphaheneicosan-1-aminium, 4-hydroxy-N,N,N-trimethyl-7-[3-(octyloxy)propoxy]-10-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



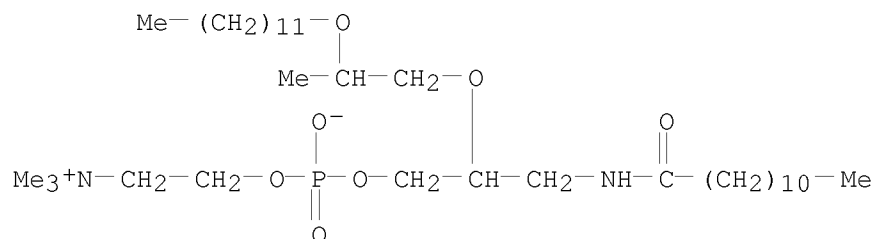
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RN 178173-01-8 USPATFULL

CN 3,5-Dioxa-9-aza-4-phosphaheneicosan-1-aminium, 7-[2-(dodecyloxy)propoxy]-4-hydroxy-N,N,N-trimethyl-10-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



L6 ANSWER 5 OF 12 USPATFULL on STN

ACCESSION NUMBER: 2007:121605 USPATFULL

TITLE: Lipid analogs for inhibiting the activity of hepatitis B antigen

INVENTOR(S): Kucera, Louis S., Pfafftown, NC, UNITED STATES

PATENT ASSIGNEE(S):

Morris-Natschke, Susan L., Apex, NC, UNITED STATES
 Ishaq, Khalid S., Chapel Hill, NC, UNITED STATES
 Wake Forest University (U.S. corporation)
 University of North Carolina at Chapel Hill (U.S.
 corporation)

| | NUMBER | KIND | DATE |
|-----------------------|---|------|---------------|
| PATENT INFORMATION: | US 2007105811 | A1 | 20070510 |
| | US 7294619 | B2 | 20071113 |
| APPLICATION INFO.: | US 2006-588308 | A1 | 20061027 (11) |
| RELATED APPLN. INFO.: | Division of Ser. No. US 2004-889127, filed on 13 Jul 2004, GRANTED, Pat. No. US 7135584 Division of Ser. No. US 1999-412539, filed on 4 Oct 1999, GRANTED, Pat. No. US 7129227 Division of Ser. No. US 1997-793470, filed on 2 May 1997, GRANTED, Pat. No. US 5962437 Continuation of Ser. No. US 1994-314901, filed on 29 Sep 1994, ABANDONED Continuation-in-part of Ser. No. US 1994-297416, filed on 29 Aug 1994, ABANDONED | | |
| DOCUMENT TYPE: | Utility | | |
| FILE SEGMENT: | APPLICATION | | |
| LEGAL REPRESENTATIVE: | MORGAN LEWIS & BOCKIUS LLP, 1111 PENNSYLVANIA AVENUE NW, WASHINGTON, DC, 20004, US | | |
| NUMBER OF CLAIMS: | 20 | | |
| EXEMPLARY CLAIM: | 1-106 | | |
| LINE COUNT: | 899 | | |

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The invention relates to methods of treating viral infections, and in particular hepatitis B virus. The method comprises administering to a subject in need of such treatment an infection-controlling amount of a phospholipid or phospholipid derivative to inhibit the activity of the viral infection.

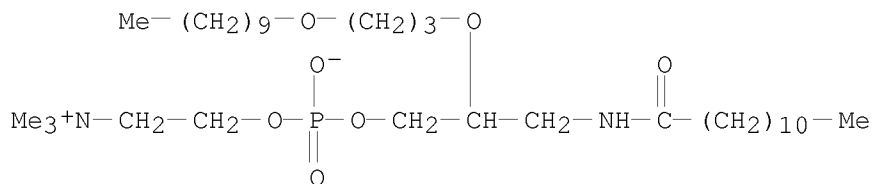
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 178172-98-0 178172-99-1 178173-00-7
 178173-01-8

(phospholipids for treating viral infections and tumors)

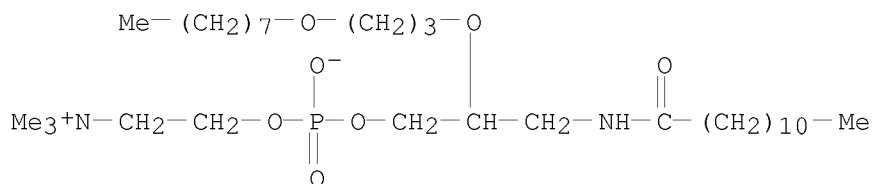
RN 178172-98-0 USPATFULL

CN 3,5-Dioxa-9-aza-4-phosphaheneicosan-1-aminium, 7-[3-(decyloxy)propoxy]-4-hydroxy-N,N,N-trimethyl-10-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



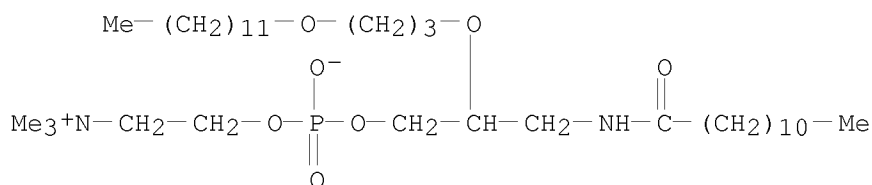
RN 178172-99-1 USPATFULL

CN 3,5-Dioxa-9-aza-4-phosphaheneicosan-1-aminium, 4-hydroxy-N,N,N-trimethyl-7-[3-(octyloxy)propoxy]-10-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



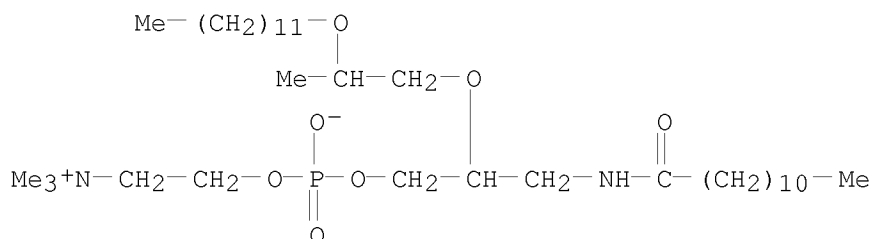
RN 178173-00-7 USPATFULL

CN 3,5-Dioxa-9-aza-4-phosphaheneicosan-1-aminium, 7-[3-(dodecyloxy)propoxy]-4-hydroxy-N,N,N-trimethyl-10-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



RN 178173-01-8 USPATFULL

CN 3,5-Dioxa-9-aza-4-phosphaheneicosan-1-aminium, 7-[2-(dodecyloxy)propoxy]-4-hydroxy-N,N,N-trimethyl-10-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



L6 ANSWER 6 OF 12 USPATFULL on STN

ACCESSION NUMBER: 2007:114796 USPATFULL

TITLE: Lipid analogs for combating tumors

INVENTOR(S): Kucera, Louis S., Pfafftown, NC, UNITED STATES
Morris-Natschke, Susan L., Apex, NC, UNITED STATES
Ishaq, Khalid S., Chapel Hill, NC, UNITED STATES

PATENT ASSIGNEE(S): Wake Forest University (U.S. corporation)

| | NUMBER | KIND | DATE |
|-----------------------|--|------|---------------|
| PATENT INFORMATION: | US 2007099870 | A1 | 20070503 |
| | US 7294621 | B2 | 20071113 |
| APPLICATION INFO.: | US 2006-588313 | A1 | 20061027 (11) |
| RELATED APPLN. INFO.: | Division of Ser. No. US 2004-943923, filed on 20 Sep 2004, GRANTED, Pat. No. US 7141557 Continuation of Ser. No. US 1999-412539, filed on 4 Oct 1999, GRANTED, Pat. No. US 7129227 Division of Ser. No. US 1997-793470, filed on 2 May 1997, GRANTED, Pat. No. US 5962437 Continuation of Ser. No. US 1994-314901, filed on 29 Sep 1994, ABANDONED Continuation-in-part of Ser. No. US | | |

1994-297416, filed on 29 Aug 1994, ABANDONED
DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: MORGAN LEWIS & BOCKIUS LLP, 1111 PENNSYLVANIA AVENUE
NW, WASHINGTON, DC, 20004, US
NUMBER OF CLAIMS: 19
EXEMPLARY CLAIM: 1-106
LINE COUNT: 900

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The invention relates to methods of treating viral infections, and in particular hepatitis B virus. The method comprises administering to a subject in need of such treatment an infection-controlling amount of a phospholipid or phospholipid derivative to inhibit the activity of the viral infection.

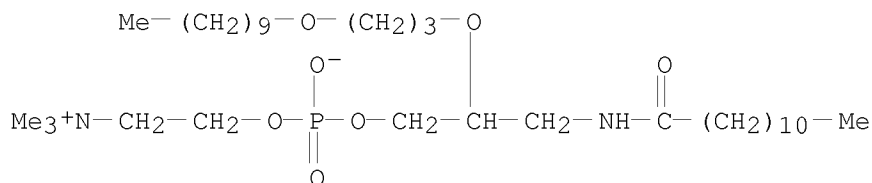
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 178172-98-0 178172-99-1 178173-00-7
178173-01-8

(phospholipids for treating viral infections and tumors)

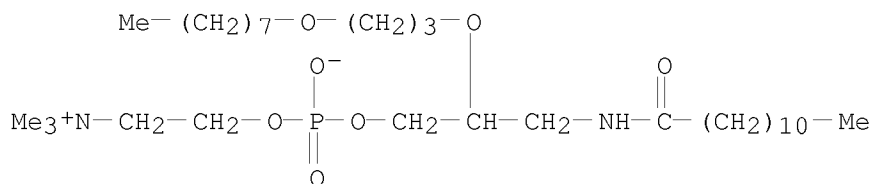
RN 178172-98-0 USPATFULL

CN 3,5-Dioxa-9-aza-4-phosphaheneicosan-1-aminium, 7-[3-(decyloxy)propoxy]-4-hydroxy-N,N,N-trimethyl-10-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



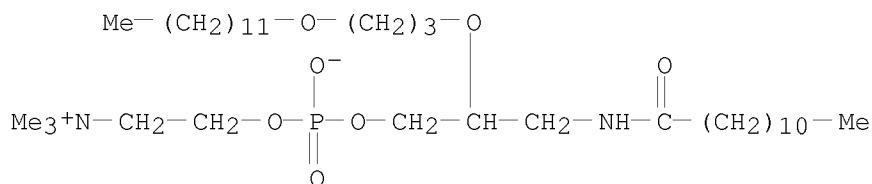
RN 178172-99-1 USPATFULL

CN 3,5-Dioxa-9-aza-4-phosphaheneicosan-1-aminium, 4-hydroxy-N,N,N-trimethyl-7-[3-(octyloxy)propoxy]-10-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)

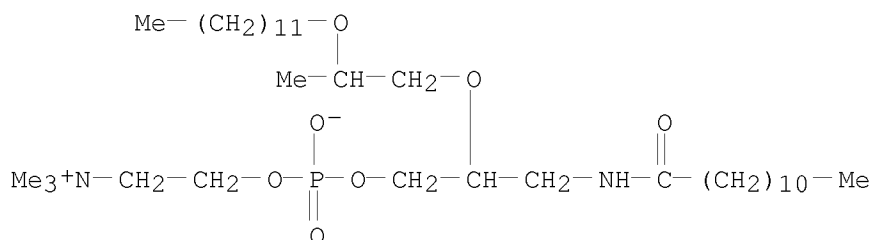


RN 178173-00-7 USPATFULL

CN 3,5-Dioxa-9-aza-4-phosphaheneicosan-1-aminium, 7-[3-(dodecyloxy)propoxy]-4-hydroxy-N,N,N-trimethyl-10-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



RN 178173-01-8 USPATFULL
 CN 3,5-Dioxa-9-aza-4-phosphaheneicosan-1-aminium, 7-[2-(dodecyloxy)propoxy]-4-hydroxy-N,N,N-trimethyl-10-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



L6 ANSWER 7 OF 12 USPATFULL on STN
 ACCESSION NUMBER: 2006:284487 USPATFULL
 TITLE: Lipid analogs for treating viral infections
 INVENTOR(S): Kucera, Louis S., Pfafftown, NC, UNITED STATES
 Morris-Natschke, Susan L., Apex, NC, UNITED STATES
 Ishaq, Khalid S., Chapel Hill, NC, UNITED STATES
 PATENT ASSIGNEE(S): Wake Forest University, Winston Salem, NC, UNITED STATES (U.S. corporation)
 University of North Carolina at Chapel Hill, Chapel Hill, NC, UNITED STATES (U.S. corporation)

| | NUMBER | KIND | DATE |
|-----------------------|---|------|--------------|
| PATENT INFORMATION: | US 7129227 | B1 | 20061031 |
| APPLICATION INFO.: | US 1999-412539 | | 19991004 (9) |
| RELATED APPLN. INFO.: | Division of Ser. No. US 2003-793470, Pat. No. US 5962437 A 371 of International Ser. No. WO 1995-US10111, filed on 7 Aug 1995 Continuation of Ser. No. US 1994-314901, filed on 29 Sep 1994, ABANDONED Continuation-in-part of Ser. No. US 1994-297416, filed on 29 Aug 1994, ABANDONED | | |
| DOCUMENT TYPE: | Utility | | |
| FILE SEGMENT: | GRANTED | | |
| PRIMARY EXAMINER: | Coleman, Brenda | | |
| LEGAL REPRESENTATIVE: | Morgan Lewis & Bockius LLP | | |
| NUMBER OF CLAIMS: | 24 | | |
| EXEMPLARY CLAIM: | 1 | | |
| LINE COUNT: | 1259 | | |

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A method of treating viral infections, and in particular HIV-1, hepatitis B virus, and herpesviruses, is disclosed. The method comprises administering to a subject in need of such treatment an infection-combating amount of a phospholipid or phospholipid derivative.

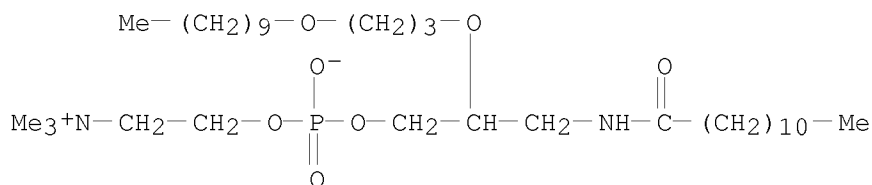
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 178172-98-0 178172-99-1 178173-00-7
178173-01-8

(phospholipids for treating viral infections and tumors)

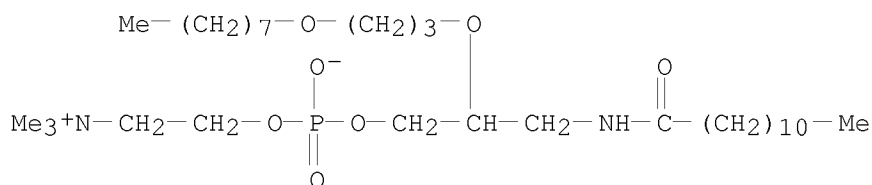
RN 178172-98-0 USPTAFULL

CN 3,5-Dioxa-9-aza-4-phosphaheneicosan-1-aminium, 7-[3-(decyloxy)propoxy]-4-hydroxy-N,N,N-trimethyl-10-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



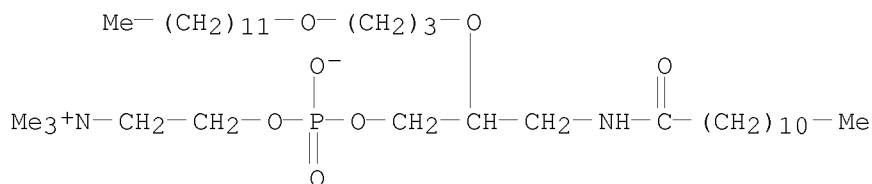
RN 178172-99-1 USPTAFULL

CN 3,5-Dioxa-9-aza-4-phosphaheneicosan-1-aminium, 4-hydroxy-N,N,N-trimethyl-7-[3-(octyloxy)propoxy]-10-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



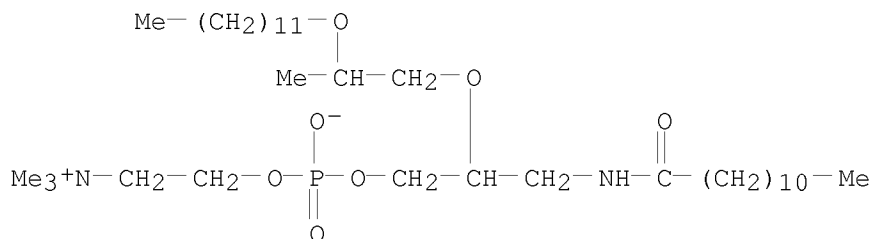
RN 178173-00-7 USPTAFULL

CN 3,5-Dioxa-9-aza-4-phosphaheneicosan-1-aminium, 7-[3-(dodecyloxy)propoxy]-4-hydroxy-N,N,N-trimethyl-10-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



RN 178173-01-8 USPTAFULL

CN 3,5-Dioxa-9-aza-4-phosphaheneicosan-1-aminium, 7-[2-(dodecyloxy)propoxy]-4-hydroxy-N,N,N-trimethyl-10-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



L6 ANSWER 8 OF 12 USPATFULL on STN

ACCESSION NUMBER: 2005:215516 USPATFULL

TITLE: Phospholipids for the treatment of infection by
togaviruses, herpes viruses
and coronaviruses

INVENTOR(S): Fleming, Ronald A., Cary, NC, UNITED STATES
Hes, Jan V., Hurdle Mills, NC, UNITED STATES
Huang, Yunsheng, Apex, NC, UNITED STATES
Read, Russ H., Rural Hall, NC, UNITED STATES
Morris-Natschke, Susan L., Apex, NC, UNITED STATES
Ishaq, Khalid S., Chapel Hill, NC, UNITED STATES
Kucera, Louis S., Pfaffown, NC, UNITED STATES
Furman, Phillip A., Durham, NC, UNITED STATES

PATENT ASSIGNEE(S): Kucera Pharmaceutical Company (U.S. corporation)

| | NUMBER | KIND | DATE |
|-----------------------|---|------|---------------|
| PATENT INFORMATION: | US 2005187192 | A1 | 20050825 |
| APPLICATION INFO.: | US 2004-783927 | A1 | 20040220 (10) |
| DOCUMENT TYPE: | Utility | | |
| FILE SEGMENT: | APPLICATION | | |
| LEGAL REPRESENTATIVE: | Madeline I. Johnston, Esq., KING & SPALDING LLP, 45th Floor, 191 Peachtree Street, N.E., Atlanta, GA, 30303, US | | |
| NUMBER OF CLAIMS: | 65 | | |
| EXEMPLARY CLAIM: | 1 | | |
| NUMBER OF DRAWINGS: | 2 Drawing Page(s) | | |
| LINE COUNT: | 2757 | | |

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Provided are compounds, methods and pharmaceutical compositions for
treating a host, especially a human, infected with a togavirus
, herpes virus and/or coronavirus, and in
particular SARS-CoV, cytomegalovirus or varicella-zoster
virus. The method in one embodiment comprises administering to
that host an effective amount of an anti-togavirus, anti-
herpes virus and/or anti-coronavirus
phospholipid or a pharmaceutically acceptable salt or prodrug thereof.
The phospholipid compound is, e.g., a 3-alkylamido-2-
alkoxypropylphosphocholine compound or salt thereof. The compound may be
administered alone or in combination and/or alternation with one or more
other anti-viral agents.

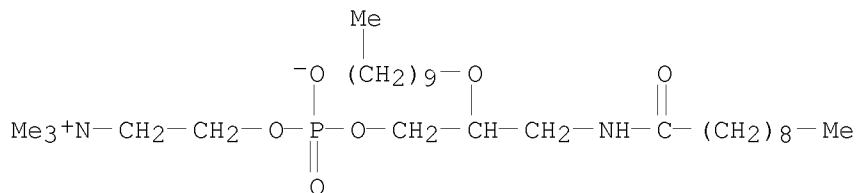
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 252371-27-0 443882-90-4 443882-91-5

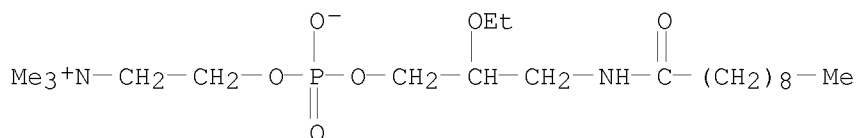
(phospholipids for treatment of infection by togaviruses, herpes
viruses and coronaviruses)

RN 252371-27-0 USPATFULL

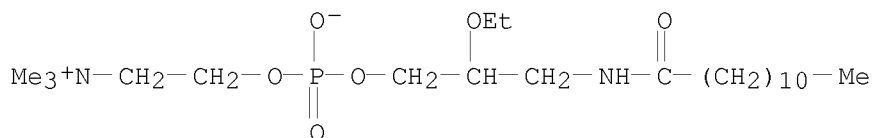
CN 3,5-Dioxa-9-aza-4-phosphanodecan-1-aminium, 7-(decyloxy)-4-hydroxy-N,N,N-
trimethyl-10-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



RN 443882-90-4 USPATFULL
 CN 3,5-Dioxa-9-aza-4-phosphanadecan-1-aminium, 7-ethoxy-4-hydroxy-N,N,N-trimethyl-10-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



RN 443882-91-5 USPATFULL
 CN 3,5-Dioxa-9-aza-4-phosphaheneicosan-1-aminium, 7-ethoxy-4-hydroxy-N,N,N-trimethyl-10-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



L6 ANSWER 9 OF 12 USPATFULL on STN
 ACCESSION NUMBER: 2005:215515 USPATFULL
 TITLE: Methods and compositions for the treatment of respiratory syncytial virus
 INVENTOR(S): Kucera, Louis S., Pfafftown, NC, UNITED STATES
 Morris-Natschke, Susan L., Apex, NC, UNITED STATES
 Ishaq, Khalid S., Chapel Hill, NC, UNITED STATES
 Fleming, Ronald A., Cary, NC, UNITED STATES
 Hess, Jan V., Hurdle Mills, NC, UNITED STATES
 Huang, Yunsheng, Apex, NC, UNITED STATES
 Read, Russ H., Rural Hall, NC, UNITED STATES
 Furman, Phillip A., Durham, NC, UNITED STATES

| | NUMBER | KIND | DATE |
|--|--|------|---------------|
| PATENT INFORMATION: | US 2005187191 | A1 | 20050825 |
| APPLICATION INFO.: | US 2004-781894 | A1 | 20040220 (10) |
| DOCUMENT TYPE: | Utility | | |
| FILE SEGMENT: | APPLICATION | | |
| LEGAL REPRESENTATIVE: | MORGAN LEWIS & BOCKIUS LLP, 1111 PENNSYLVANIA AVENUE NW, WASHINGTON, DC, 20004, US | | |
| NUMBER OF CLAIMS: | 39 | | |
| EXEMPLARY CLAIM: | 1 | | |
| NUMBER OF DRAWINGS: | 1 Drawing Page(s) | | |
| LINE COUNT: | 2105 | | |
| CAS INDEXING IS AVAILABLE FOR THIS PATENT. | | | |
| AB | The invention includes compounds useful for inhibiting RSV replication | | |

and treating a host infected with RSV. The invention also includes methods of treating a host infected with RSV by administering to the host an anti-RSV effective amount of a compound of the invention.

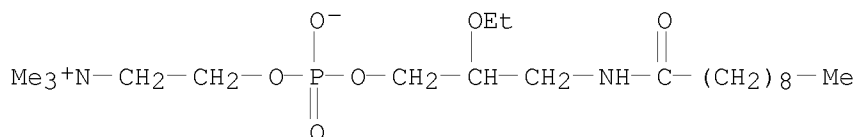
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 443882-90-4, KPC 11 443882-91-5, KPC 15

(compns. for treatment of respiratory syncytial virus)

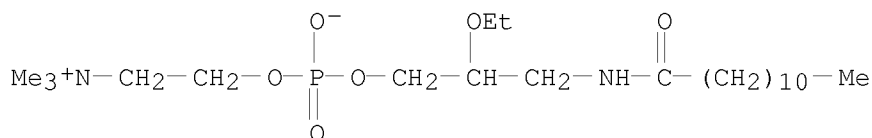
RN 443882-90-4 USPATFULL

CN 3,5-Dioxa-9-aza-4-phosphanonadecan-1-aminium, 7-ethoxy-4-hydroxy-N,N,N-trimethyl-10-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



RN 443882-91-5 USPATFULL

CN 3,5-Dioxa-9-aza-4-phosphaheneicosan-1-aminium, 7-ethoxy-4-hydroxy-N,N,N-trimethyl-10-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



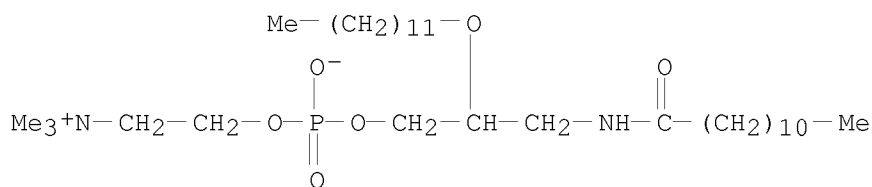
IT 207298-91-7 207298-93-9 252371-27-0

443882-96-0

(compns. for treatment of respiratory syncytial virus)

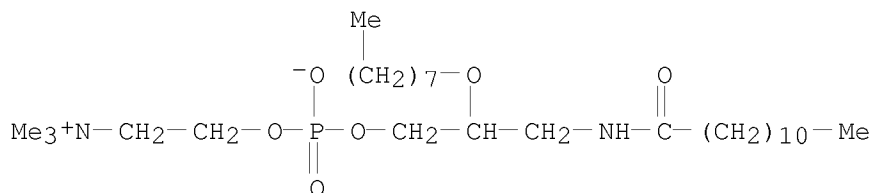
RN 207298-91-7 USPATFULL

CN 3,5-Dioxa-9-aza-4-phosphaheneicosan-1-aminium, 7-(dodecyloxy)-4-hydroxy-N,N,N-trimethyl-10-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)

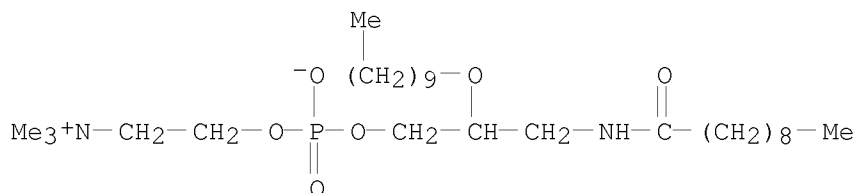


RN 207298-93-9 USPATFULL

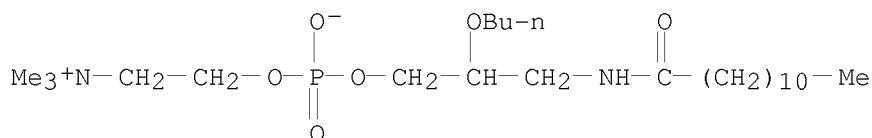
CN 3,5-Dioxa-9-aza-4-phosphaheneicosan-1-aminium, 4-hydroxy-N,N,N-trimethyl-7-(octyloxy)-10-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



RN 252371-27-0 USPATFULL
 CN 3,5-Dioxa-9-aza-4-phosphanadecan-1-aminium, 7-(decyloxy)-4-hydroxy-N,N,N-trimethyl-10-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



RN 443882-96-0 USPATFULL
 CN 3,5-Dioxa-9-aza-4-phosphaheneicosan-1-aminium, 7-butoxy-4-hydroxy-N,N,N-trimethyl-10-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



L6 ANSWER 10 OF 12 USPATFULL on STN
 ACCESSION NUMBER: 2005:93372 USPATFULL
 TITLE: Lipid analogs for treating viral infections
 INVENTOR(S): Kucera, Louis S., Pfafftown, NC, UNITED STATES
 Morris-Natschke, Susan L., Apex, NC, UNITED STATES
 Ishaq, Khalid S., Chapel Hill, NC, UNITED STATES
 PATENT ASSIGNEE(S): Wake Forest University, Winston-Salem, NC, UNITED STATES (U.S. corporation)
 University of North Carolina at Chapel Hill, Chapel Hill, NC, UNITED STATES (U.S. corporation)

| | NUMBER | KIND | DATE |
|-----------------------|---|------|---------------|
| PATENT INFORMATION: | US 2005080050 | A1 | 20050414 |
| | US 7141557 | B2 | 20061128 |
| APPLICATION INFO.: | US 2004-943923 | A1 | 20040920 (10) |
| RELATED APPLN. INFO.: | Continuation of Ser. No. US 1999-412539, filed on 4 Oct 1999, PENDING Division of Ser. No. US 1997-793470, filed on 2 May 1997, GRANTED, Pat. No. US 5962437 A 371 of International Ser. No. WO 1995-US10111, filed on 7 Aug 1995 | | |
| DOCUMENT TYPE: | Utility | | |
| FILE SEGMENT: | APPLICATION | | |
| LEGAL REPRESENTATIVE: | MORGAN LEWIS & BOCKIUS LLP, 1111 PENNSYLVANIA AVENUE NW, WASHINGTON, DC, 20004, US | | |
| NUMBER OF CLAIMS: | 34 | | |
| EXEMPLARY CLAIM: | 1-106 | | |
| LINE COUNT: | 960 | | |

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A method of treating viral infections, and in particular HIV-1, hepatitis B virus, and herpes virus, is disclosed. The method comprises administering to a subject in need of such treatment an infection-controlling amount of a phospholipid or phospholipid derivative.

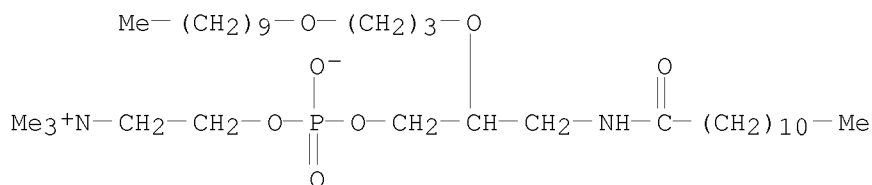
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 178172-98-0 178172-99-1 178173-00-7
178173-01-8

(phospholipids for treating viral infections and tumors)

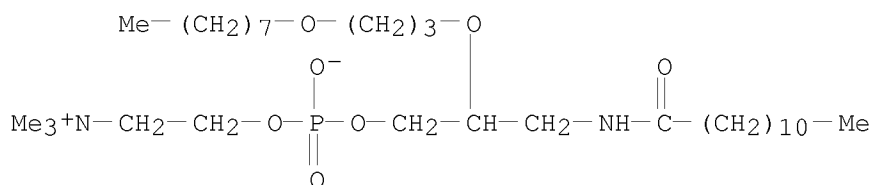
RN 178172-98-0 USPTAFULL

CN 3,5-Dioxa-9-aza-4-phosphaheneicosan-1-aminium, 7-[3-(decyloxy)propoxy]-4-hydroxy-N,N,N-trimethyl-10-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



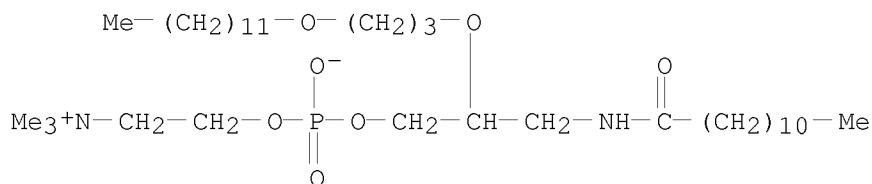
RN 178172-99-1 USPTAFULL

CN 3,5-Dioxa-9-aza-4-phosphaheneicosan-1-aminium, 4-hydroxy-N,N,N-trimethyl-7-[3-(octyloxy)propoxy]-10-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



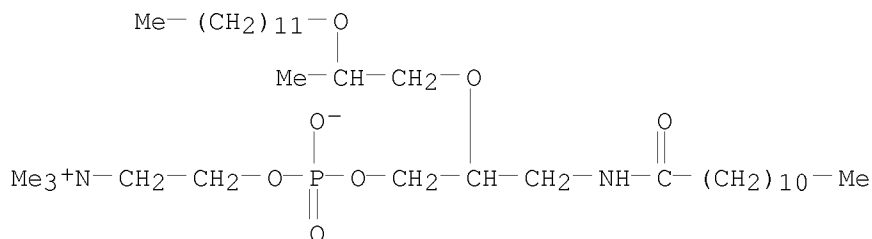
RN 178173-00-7 USPTAFULL

CN 3,5-Dioxa-9-aza-4-phosphaheneicosan-1-aminium, 7-[3-(dodecyloxy)propoxy]-4-hydroxy-N,N,N-trimethyl-10-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



RN 178173-01-8 USPTAFULL

CN 3,5-Dioxa-9-aza-4-phosphaheneicosan-1-aminium, 7-[2-(dodecyloxy)propoxy]-4-hydroxy-N,N,N-trimethyl-10-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



L6 ANSWER 11 OF 12 USPATFULL on STN

ACCESSION NUMBER: 2004:328020 USPATFULL

TITLE: Lipid analogs for treating viral infections

INVENTOR(S): Kucera, Louis S., Pfafftown, NC, UNITED STATES
Morris-Natschke, Susan L., Apex, NC, UNITED STATES
Ishaq, Khalid S., Chapel Hill, NC, UNITED STATES

PATENT ASSIGNEE(S): Wake Forest University, Winston-Salem, NC (U.S. corporation)
University of North Carolina at Chapel Hill, Chapel Hill, NC (U.S. corporation)

| | NUMBER | KIND | DATE |
|-----------------------|--|------|---------------|
| PATENT INFORMATION: | US 2004259845 | A1 | 20041223 |
| | US 7135584 | B2 | 20061114 |
| APPLICATION INFO.: | US 2004-889127 | A1 | 20040713 (10) |
| RELATED APPLN. INFO.: | Continuation of Ser. No. US 1999-412539, filed on 4 Oct 1999, ABANDONED Division of Ser. No. US 1997-793470, filed on 2 May 1997, GRANTED, Pat. No. US 5962437 A 371 of International Ser. No. WO 1995-US10111, filed on 7 Aug 1995, PENDING | | |
| DOCUMENT TYPE: | Utility | | |
| FILE SEGMENT: | APPLICATION | | |
| LEGAL REPRESENTATIVE: | MORGAN LEWIS & BOCKIUS LLP, 1111 PENNSYLVANIA AVENUE NW, WASHINGTON, DC, 20004 | | |
| NUMBER OF CLAIMS: | 19 | | |
| EXEMPLARY CLAIM: | CLM-1-106 | | |
| LINE COUNT: | 903 | | |

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A method of treating viral infections, and in particular HIV-1, hepatitis B virus, and herpes virus, is disclosed. The method comprises administering to a subject in need of such treatment an infection-controlling amount of a phospholipid or phospholipid derivative.

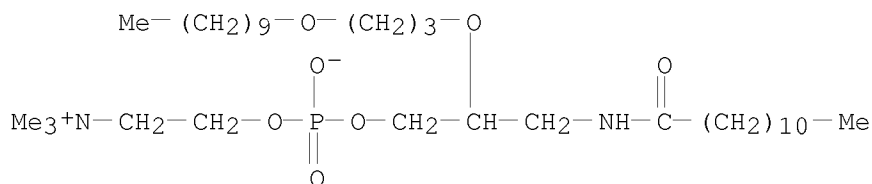
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 178172-98-0 178172-99-1 178173-00-7
178173-01-8

(phospholipids for treating viral infections and tumors)

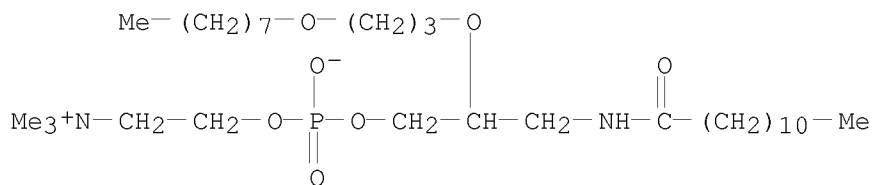
RN 178172-98-0 USPATFULL

CN 3,5-Dioxa-9-aza-4-phosphaheneicosan-1-aminium, 7-[3-(decyloxy)propoxy]-4-hydroxy-N,N,N-trimethyl-10-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



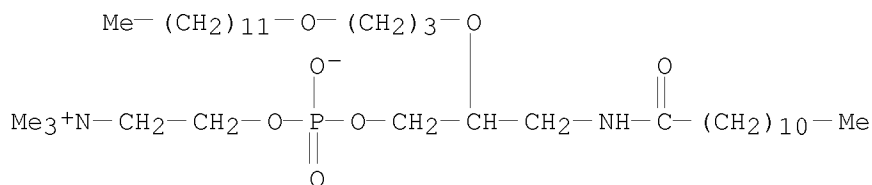
RN 178172-99-1 USPATFULL

CN 3,5-Dioxa-9-aza-4-phosphaheneicosan-1-aminium, 4-hydroxy-N,N,N-trimethyl-7-[3-(octyloxy)propoxy]-10-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



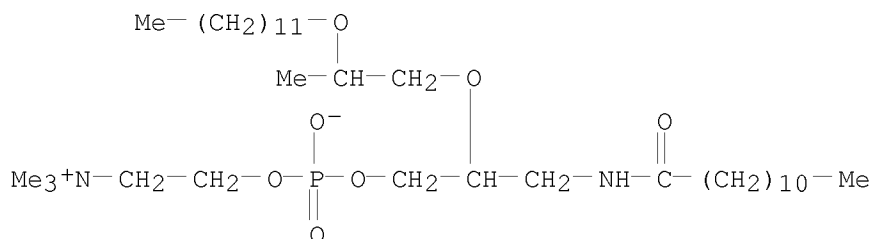
RN 178173-00-7 USPATFULL

CN 3,5-Dioxa-9-aza-4-phosphaheneicosan-1-aminium, 7-[3-(dodecyloxy)propoxy]-4-hydroxy-N,N,N-trimethyl-10-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



RN 178173-01-8 USPATFULL

CN 3,5-Dioxa-9-aza-4-phosphaheneicosan-1-aminium, 7-[2-(dodecyloxy)propoxy]-4-hydroxy-N,N,N-trimethyl-10-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



L6 ANSWER 12 OF 12 USPATFULL on STN

ACCESSION NUMBER: 1999:121339 USPATFULL

TITLE: Lipid analogs for treating viral infections

INVENTOR(S): Kucera, Louis S., Pfafftown, NC, United States
Morris-Natschke, Susan L., Apex, NC, United States

PATENT ASSIGNEE(S): Ishaq, Khalid S., Chapel Hill, NC, United States
Wake Forest University, Winston-Salem, NC, United States (U.S. corporation)

| | NUMBER | KIND | DATE |
|-----------------------|--|------|--------------------------|
| PATENT INFORMATION: | US 5962437 | | 19991005 |
| | WO 9606620 | | 19960307 |
| APPLICATION INFO.: | US 1997-793470 | | 19970502 (8) |
| | WO 1995-US10111 | | 19950807 |
| | | | 19970502 PCT 371 date |
| | | | 19970502 PCT 102(e) date |
| RELATED APPLN. INFO.: | Continuation of Ser. No. US 1994-314901, filed on 29 Sep 1994, now abandoned which is a continuation-in-part of Ser. No. US 1994-297416, filed on 29 Aug 1994, now abandoned | | |
| DOCUMENT TYPE: | Utility | | |
| FILE SEGMENT: | Granted | | |
| PRIMARY EXAMINER: | Raymond, Richard L. | | |
| ASSISTANT EXAMINER: | Coleman, Brenda | | |
| LEGAL REPRESENTATIVE: | Schwegman, Lundberg, Woessner & Kluth, P.A. | | |
| NUMBER OF CLAIMS: | 33 | | |
| EXEMPLARY CLAIM: | 1 | | |
| LINE COUNT: | 1159 | | |

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A method of treating viral infections, and in particular HIV-1, hepatitis B virus and herpes viruses, is disclosed. The method comprising administering to a subject in need of such treatment an infection-combating amount of a phospholipid or phospholipid derivative.

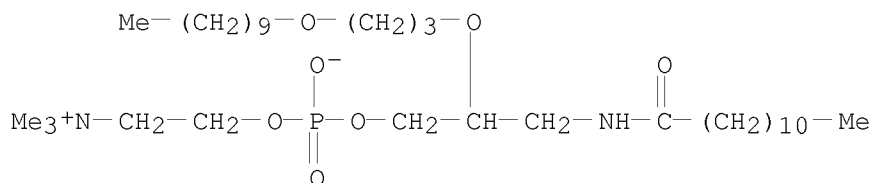
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 178172-98-0 178172-99-1 178173-00-7
178173-01-8

(phospholipids for treating viral infections and tumors)

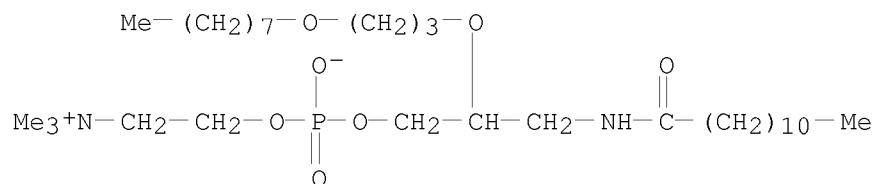
RN 178172-98-0 USPATFULL

CN 3,5-Dioxa-9-aza-4-phosphaheneicosan-1-aminium, 7-[3-(decyloxy)propoxy]-4-hydroxy-N,N,N-trimethyl-10-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



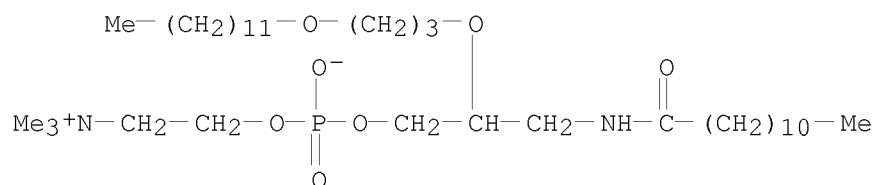
RN 178172-99-1 USPATFULL

CN 3,5-Dioxa-9-aza-4-phosphaheneicosan-1-aminium, 4-hydroxy-N,N,N-trimethyl-7-[3-(octyloxy)propoxy]-10-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



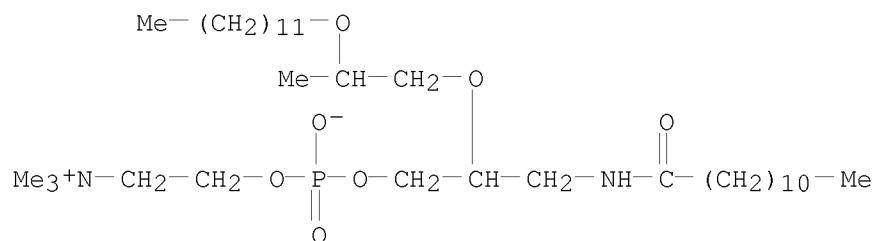
RN 178173-00-7 USPATFULL

CN 3,5-Dioxa-9-aza-4-phosphaheneicosan-1-aminium, 7-[3-(dodecyloxy)propoxy]-4-hydroxy-N,N,N-trimethyl-10-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



RN 178173-01-8 USPATFULL

CN 3,5-Dioxa-9-aza-4-phosphaheneicosan-1-aminium, 7-[2-(dodecyloxy)propoxy]-4-hydroxy-N,N,N-trimethyl-10-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



=> d his

(FILE 'HOME' ENTERED AT 14:01:05 ON 22 FEB 2008)

FILE 'REGISTRY' ENTERED AT 14:01:16 ON 22 FEB 2008

L1 STRUCTURE UPLOADED

L2 70 S L1 FULL

FILE 'MEDLINE, CAPLUS, WPIDS, USPATFULL' ENTERED AT 14:01:45 ON 22 FEB 2008

L3 48 S L2

L4 23 S L3 AND ?VIRUS?

L5 127186 S L4 AND CORONAVIRUS OR HERPES OR TOGAVIRUS

L6 12 S L4 AND (CORONAVIRUS OR HERPES OR TOGAVIRUS)

=> d 14 1-23 ibib, abs, hitstr

L4 ANSWER 1 OF 23 MEDLINE on STN

ACCESSION NUMBER: 91202492 MEDLINE

DOCUMENT NUMBER: PubMed ID: 2016713
TITLE: In vitro evaluation of phosphocholine and quaternary ammonium containing lipids as novel anti-HIV agents.
AUTHOR: Meyer K L; Marasco C J Jr; Morris-Natschke S L; Ishaq K S; Piantadosi C
CORPORATE SOURCE: University of North Carolina, School of Pharmacy, Division of Medicinal Chemistry and Natural Products, Chapel Hill 27599.
CONTRACT NUMBER: CA 12197 (United States NCI)
CA 42216 (United States NCI)
RR 05404 (United States NCRR)
SOURCE: Journal of medicinal chemistry, (1991 Apr) Vol. 34, No. 4, pp. 1377-83.
Journal code: 9716531. ISSN: 0022-2623.
PUB. COUNTRY: United States
DOCUMENT TYPE: (COMPARATIVE STUDY)
Journal; Article; (JOURNAL ARTICLE)
(RESEARCH SUPPORT, NON-U.S. GOV'T)
(RESEARCH SUPPORT, U.S. GOV'T, P.H.S.)
LANGUAGE: English
FILE SEGMENT: Priority Journals; AIDS
ENTRY MONTH: 199105
ENTRY DATE: Entered STN: 7 Jun 1991
Last Updated on STN: 3 Feb 1997
Entered Medline: 21 May 1991

AB A series of synthetic lipids containing a two- or three-carbon backbone substituted with a thio, oxy, or amidoalkyl functionality and either a phosphocholine or quaternary ammonium moiety was evaluated as potential anti-HIV-1 agents. Several analogues were identified as possessing activity with the most promising compound being rac-3-octadecanamido-2-ethoxypropylphosphocholine (8). Compound 8 exhibited an IC50 for the inhibition of plaque formation of 0.16 microM which was 84-fold lower than the IC50 value determined for CEM-SS cell growth inhibition. Initial mechanistic studies have indicated that these compounds, unlike AZT, are not reverse transcriptase (RT) inhibitors, but instead appear to inhibit a late step in HIV replication involving virus assembly and infectious virus production. Since these lipids are acting via a different mechanism, they represent an alternative approach to the chemotherapeutic treatment of AIDS as well as candidates for combination therapy with AZT.

L4 ANSWER 2 OF 23 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2006:198407 CAPLUS
DOCUMENT NUMBER: 144:403777
TITLE: Using small molecules to overcome drug resistance induced by a viral oncogene
AUTHOR(S): Smukste, Inese; Bhalala, Oneil; Persico, Marco; Stockwell, Brent R.
CORPORATE SOURCE: Department of Biological Sciences and Department of Chemistry, Fairchild Center, Columbia University, New York, NY, 10027, USA
SOURCE: Cancer Cell (2006), 9(2), 133-146
CODEN: CCAECI; ISSN: 1535-6108
PUBLISHER: Cell Press
DOCUMENT TYPE: Journal
LANGUAGE: English

AB We used small mol. screening to discover compds. and mechanisms for overcoming E6 oncogene-mediated drug resistance. Using high-throughput screening in isogenic cell lines, we identified compds. that potentiate doxorubicin's lethality in E6-expressing colon cancer cells. Such compds. included quaternary ammonium salts, protein synthesis inhibitors, 11-deoxyprostaglandins, and two addnl. classes of compds.-analogs of

1,3-bis(4-morpholinylmethyl)-2-imidazolidinethione (a thiourea) and acylated secondary amines that we named indoxins. Indoxins upregulated topoisomerase II α , the target of doxorubicin, thereby increasing doxorubicin lethality. We developed a photolabeling strategy to identify targets of indoxin and discovered a nuclear actin-related protein complex as a candidate indoxin target.

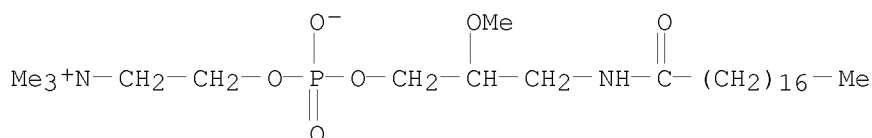
IT 88876-07-7

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(small mols. which overcome drug resistance induced by a viral oncogene)

RN 88876-07-7 CAPLUS

CN 3,5-Dioxa-9-aza-4-phosphaheptacosan-1-aminium, 4-hydroxy-7-methoxy-N,N,N-trimethyl-10-oxo-, inner salt, 4-oxide (CA INDEX NAME)



REFERENCE COUNT: 58 THERE ARE 58 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 3 OF 23 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2005:904330 CAPLUS

DOCUMENT NUMBER: 143:222464

TITLE: Phospholipids for the treatment of infection by togaviruses, herpes viruses and coronaviruses

INVENTOR(S): Fleming, Ronald A.; Hes, Jan V.; Huang, Yunsheng; Read, Russ H.; Morris-Natschke, Susan L.; Ishaq, Khalid S.; Kucera, Louis S.; Furman, Phillip A.

PATENT ASSIGNEE(S): Kucera Pharmaceutical Company, USA

SOURCE: U.S. Pat. Appl. Publ., 36 pp.

CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------------------|------|----------|-----------------|----------|
| US 2005187192 | A1 | 20050825 | US 2004-783927 | 20040220 |
| PRIORITY APPLN. INFO.: | | | US 2004-783927 | 20040220 |

OTHER SOURCE(S): MARPAT 143:222464

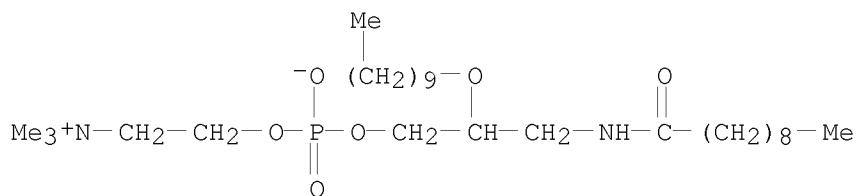
AB Provided are compds., methods and pharmaceutical compns. for treating a host, especially a human, infected with a togavirus, herpes virus and/or coronavirus, and in particular SARS-CoV, cytomegalovirus or varicella-zoster virus. The method in one embodiment comprises administering to that host an effective amount of an anti-togavirus, anti-herpes virus and/or anti-coronavirus phospholipid or a pharmaceutically acceptable salt or prodrug thereof. The phospholipid compound is, e.g., a 3-alkylamido-2-alkoxypropylphosphocholine compound or salt thereof. The compound may be administered alone or in combination and/or alternation with one or more other antiviral agents. The EC₅₀ of an alkylamido-2-alkoxypropylphosphocholine against varicella zoster virus was 0.48 $\mu\text{g/mL}$.

IT 252371-27-0 443882-90-4 443882-91-5

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL
(Biological study); USES (Uses)
(phospholipids for treatment of infection by togaviruses,
herpes viruses and coronaviruses)

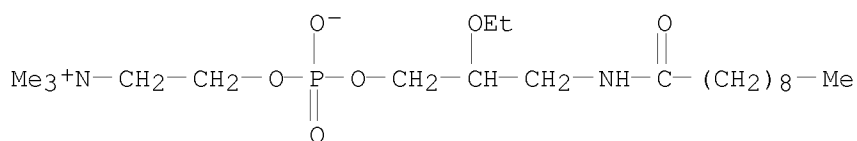
RN 252371-27-0 CAPLUS

CN 3,5-Dioxa-9-aza-4-phosphanadecan-1-aminium, 7-(decyloxy)-4-hydroxy-N,N,N-trimethyl-10-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



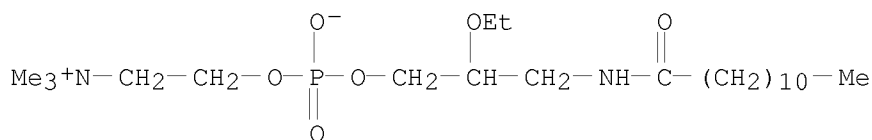
RN 443882-90-4 CAPLUS

CN 3,5-Dioxa-9-aza-4-phosphanadecan-1-aminium, 7-ethoxy-4-hydroxy-N,N,N-trimethyl-10-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



RN 443882-91-5 CAPLUS

CN 3,5-Dioxa-9-aza-4-phosphaheneicosan-1-aminium, 7-ethoxy-4-hydroxy-N,N,N-trimethyl-10-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



L4 ANSWER 4 OF 23 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2005:902611 CAPLUS

DOCUMENT NUMBER: 143:241938

TITLE: Methods and compositions for the treatment of
respiratory syncytial virus

INVENTOR(S): Kucera, Louis S.; Morris-Natschke, Susan L.; Ishaq,
Khalid S.; Fleming, Ronald A.; Hess, Jan V.; Huang,
Yunsheng; Read, Russ H.; Furman, Phillip A.

PATENT ASSIGNEE(S): USA

SOURCE: U.S. Pat. Appl. Publ., 29 pp.

CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---------------|------|----------|-----------------|----------|
| US 2005187191 | A1 | 20050825 | US 2004-781894 | 20040220 |

WO 2005099719 A2 20051027 WO 2005-US3972 20050209
 WO 2005099719 A3 20070322
 W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
 CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
 GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
 LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI,
 NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM,
 SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
 RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM,
 AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK,
 EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT,
 RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML,
 MR, NE, SN, TD, TG

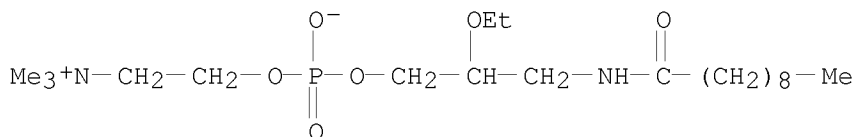
PRIORITY APPLN. INFO.: US 2004-781894 A 20040220
 OTHER SOURCE(S): MARPAT 143:241938

AB The invention includes compds. useful for inhibiting RSV replication and treating a host infected with RSV. The invention also includes methods of treating a host infected with RSV by administering to the host an anti-RSV effective amount of a compound of the invention.

IT 443882-90-4, KPC 11 443882-91-5, KPC 15
 RL: ADV (Adverse effect, including toxicity); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (compns. for treatment of respiratory syncytial virus)

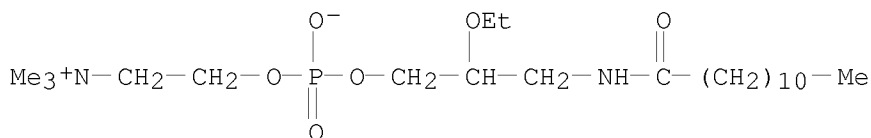
RN 443882-90-4 CAPLUS

CN 3,5-Dioxa-9-aza-4-phosphanonadecan-1-aminium, 7-ethoxy-4-hydroxy-N,N,N-trimethyl-10-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



RN 443882-91-5 CAPLUS

CN 3,5-Dioxa-9-aza-4-phosphaheneicosan-1-aminium, 7-ethoxy-4-hydroxy-N,N,N-trimethyl-10-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)

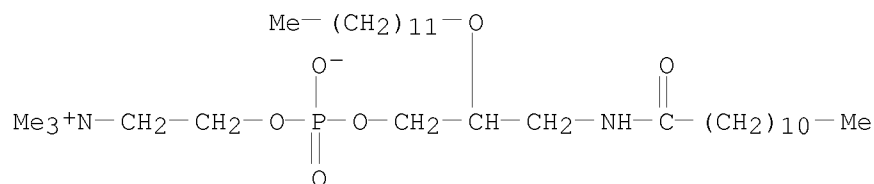


IT 207298-91-7 207298-93-9 252371-27-0
 443882-96-0

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (compns. for treatment of respiratory syncytial virus)

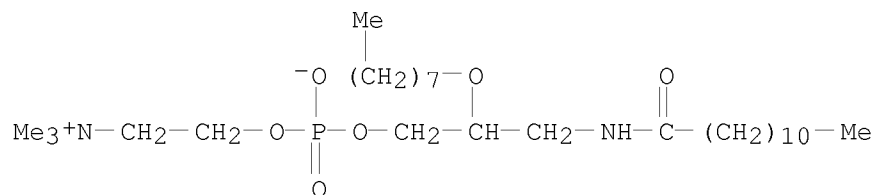
RN 207298-91-7 CAPLUS

CN 3,5-Dioxa-9-aza-4-phosphaheneicosan-1-aminium, 7-(dodecyloxy)-4-hydroxy-N,N,N-trimethyl-10-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



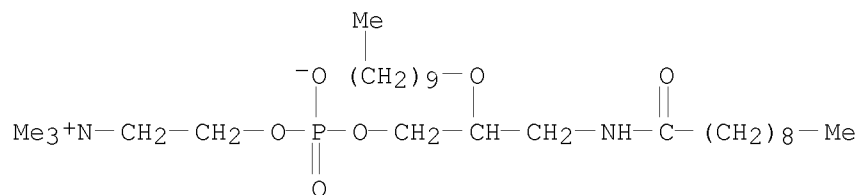
RN 207298-93-9 CAPLUS

CN 3,5-Dioxa-9-aza-4-phosphaheneicosan-1-aminium, 4-hydroxy-N,N,N-trimethyl-7-(octyloxy)-10-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



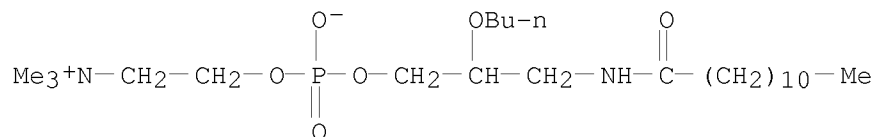
RN 252371-27-0 CAPLUS

CN 3,5-Dioxa-9-aza-4-phosphanonadecan-1-aminium, 7-(decyloxy)-4-hydroxy-N,N,N-trimethyl-10-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



RN 443882-96-0 CAPLUS

CN 3,5-Dioxa-9-aza-4-phosphaheneicosan-1-aminium, 7-butoxy-4-hydroxy-N,N,N-trimethyl-10-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



L4 ANSWER 5 OF 23 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1998:435743 CAPLUS

DOCUMENT NUMBER: 129:90448

TITLE: Method of treating hepatitis virus infections

INVENTOR(S): Kucera, Louis S.; Morris-Natschke, Susan L.

PATENT ASSIGNEE(S): Wake Forest University, USA; University of North Carolina

SOURCE: U.S., 17 pp., Cont.-in-part of U. S. Ser. No. 74,943, abandoned.

CODEN: USXXAM

DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 2
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------------------|------|----------|-----------------|-------------|
| US 5770584 | A | 19980623 | US 1995-465947 | 19950606 |
| US 6030960 | A | 20000229 | US 1998-102308 | 19980622 |
| PRIORITY APPLN. INFO.: | | | US 1993-74943 | B2 19930610 |
| | | | US 1995-465947 | A3 19950606 |

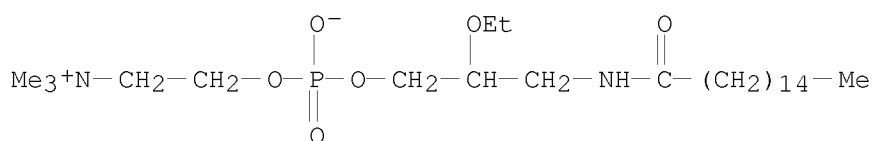
OTHER SOURCE(S): MARPAT 129:90448

AB A method of treating hepatitis virus infection is disclosed.
 The method involves administering to a human subject in need of such treatment an effective hepatitis virus-combating amount of an alkyl lipid or alkyl lipid derivative

IT 112989-01-2P 112989-02-3P 209532-02-5P
 209532-03-6P
 RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
 (alkyl lipids for treating hepatitis virus infections)

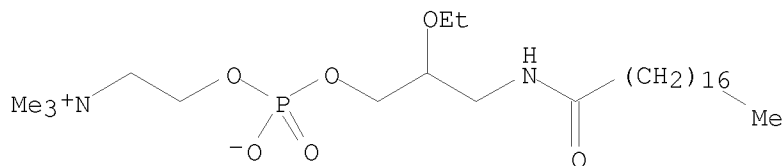
RN 112989-01-2 CAPLUS

CN 3,5-Dioxa-9-aza-4-phosphapentacosan-1-aminium, 7-ethoxy-4-hydroxy-N,N,N-trimethyl-10-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



RN 112989-02-3 CAPLUS

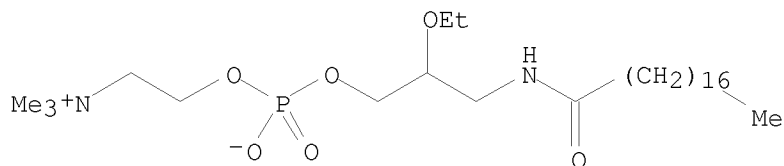
CN 3,5-Dioxa-9-aza-4-phosphaheptacosan-1-aminium, 7-ethoxy-4-hydroxy-N,N,N-trimethyl-10-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



RN 209532-02-5 CAPLUS

CN 3,5-Dioxa-9-aza-4-phosphaheptacosan-1-aminium, 7-ethoxy-4-hydroxy-N,N,N-trimethyl-10-oxo-, inner salt, 4-oxide, (+)- (9CI) (CA INDEX NAME)

Rotation (+).

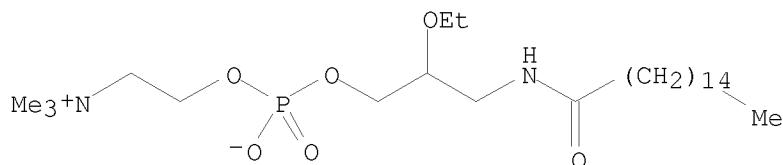


RN 209532-03-6 CAPLUS

CN 3,5-Dioxa-9-aza-4-phosphapentacosan-1-aminium, 7-ethoxy-4-hydroxy-N,N,N-

trimethyl-10-oxo-, inner salt, 4-oxide, (+)- (9CI) (CA INDEX NAME)

Rotation (+).



REFERENCE COUNT: 67 THERE ARE 67 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 6 OF 23 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1998:205430 CAPLUS

DOCUMENT NUMBER: 128:316940

TITLE: In vitro evaluation and characterization of newly designed alkylamidophospholipid analogs as anti-human immunodeficiency virus type 1 agents

AUTHOR(S): Kucera, L. S.; Iyer, N.; Morris-Natschke, S. L.; Chen, S. Y.; Gumus, F.; Ishaq, K.; Herrmann, D. B. J.

CORPORATE SOURCE: Wake Forest University School Medicine, Winston-Salem, NC, USA

SOURCE: Antiviral Chemistry & Chemotherapy (1998), 9(2), 157-165

CODEN: ACCHEH; ISSN: 0956-3202

PUBLISHER: International Medical Press

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Our labs. first reported two novel classes of complex synthetic lipids, including alkylamidophosphocholines (PC lipid; CP-51) and alkylamidophosphate ester-linked lipid-AZT conjugates (lipid-AZT conjugates; CP-92), with selective and potent activity against human immunodeficiency virus type 1 (HIV-1). To extend these observations, we synthesized addnl. PC lipids and lipid-AZT conjugates (INK and INK-AZT conjugate) to evaluate their structure-activity relationships by testing for selectivity against infectious wild-type (wt) and drug-resistant HIV-1 replication, virus fusogenic activity and toxicity replication, virus fusogenic activity and toxicity for mouse bone marrow cells. PC lipid compds. with medium chain lengths at positions 1 and 2 gave an improved selective index (SI). INK-3, with 12 and 8 carbons and INK-15, with 10 and 12 carbons were among the most selective when evaluated in CEM-SS cells. INK-14, a lipid-AZT conjugate where AZT replaced the choline in PC lipid INK-3, gave the highest SI of >1250 against both infectious wt HIV-1 replication in CEM-SS cells and a clin. isolate in peripheral blood leukocytes. Notably, the PC lipid compds. INK-3 and INK-15, but not the lipid-AZT conjugate INK-14, were potent inhibitors of matched pairs of AZT-sensitive and AZT-resistant HIV-1 clin. isolates. INK-3 also inhibited replication of HIV-2 and TIBO-resistant HIV-1, and inhibited HIV-1-mediated fusogenic activity by 78, 41 and 9% in a dose-dependent manner. The TC50 for mouse bone marrow cells was >100 µg/mL for CP-51 and 0.142-0.259 µg/mL for AZT. These data suggest that optimum PC lipid compds. are significantly less toxic than AZT and have high potential as novel therapeutic agents for AIDS.

IT 207298-91-7P 207298-92-8P 207298-93-9P

207298-94-0P 207298-95-1P 207298-97-3P

207298-99-5P

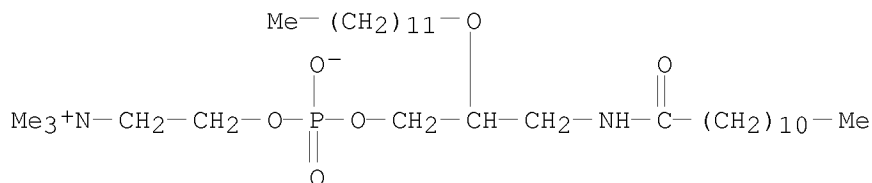
RL: ADV (Adverse effect, including toxicity); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study);

PREP (Preparation); USES (Uses)

(anti-HIV-1 activity and preparation of alkylamidophospholipid analogs)

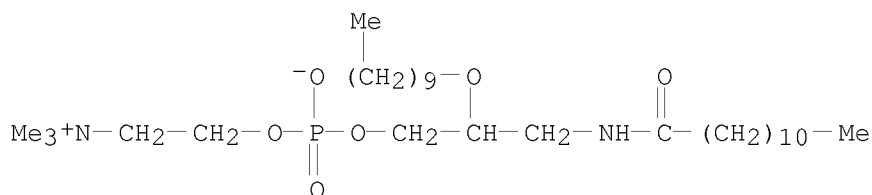
RN 207298-91-7 CAPLUS

CN 3,5-Dioxa-9-aza-4-phosphaheneicosan-1-aminium, 7-(dodecyloxy)-4-hydroxy-N,N,N-trimethyl-10-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



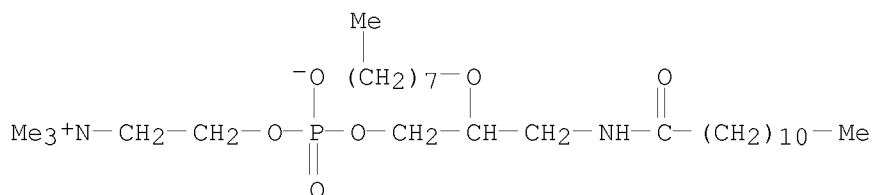
RN 207298-92-8 CAPLUS

CN 3,5-Dioxa-9-aza-4-phosphaheneicosan-1-aminium, 7-(decyloxy)-4-hydroxy-N,N,N-trimethyl-10-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



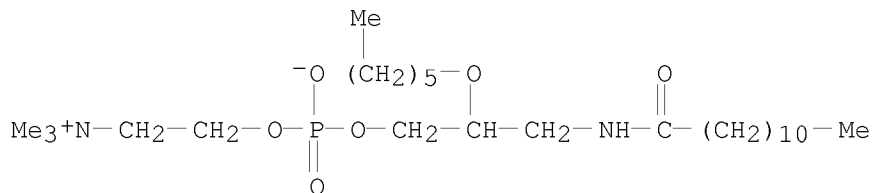
RN 207298-93-9 CAPLUS

CN 3,5-Dioxa-9-aza-4-phosphaheneicosan-1-aminium, 4-hydroxy-N,N,N-trimethyl-7-(octyloxy)-10-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



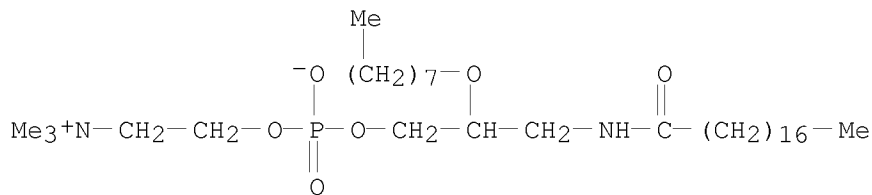
RN 207298-94-0 CAPLUS

CN 3,5-Dioxa-9-aza-4-phosphaheneicosan-1-aminium, 7-(hexyloxy)-4-hydroxy-N,N,N-trimethyl-10-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



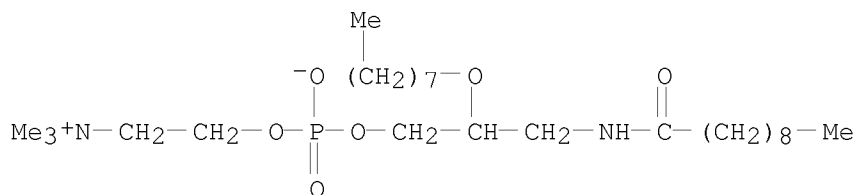
RN 207298-95-1 CAPLUS

CN 3,5-Dioxa-9-aza-4-phosphaheneicosan-1-aminium, 4-hydroxy-N,N,N-trimethyl-7-(octyloxy)-10-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



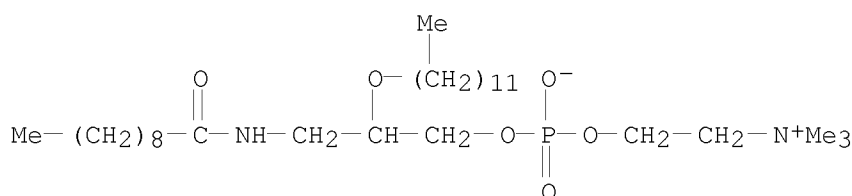
RN 207298-97-3 CAPLUS

CN 3,5-Dioxa-9-aza-4-phosphanonadecan-1-aminium, 4-hydroxy-N,N,N-trimethyl-7-(octyloxy)-10-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



RN 207298-99-5 CAPLUS

CN 3,5-Dioxa-9-aza-4-phosphanonadecan-1-aminium, 7-(dodecyloxy)-4-hydroxy-N,N,N-trimethyl-10-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)

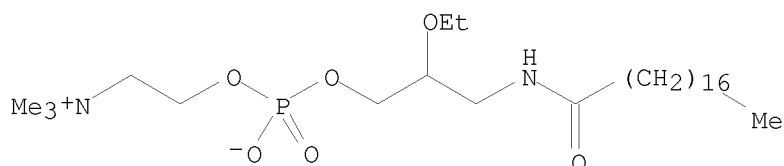


IT 112989-02-3, CP 51

RL: ADV (Adverse effect, including toxicity); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(anti-HIV-1 activity and preparation of alkylamidophospholipid analogs)

RN 112989-02-3 CAPLUS

CN 3,5-Dioxa-9-aza-4-phosphaheptacosan-1-aminium, 7-ethoxy-4-hydroxy-N,N,N-trimethyl-10-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



REFERENCE COUNT: 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 7 OF 23 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1996:388263 CAPLUS

DOCUMENT NUMBER: 125:49273

TITLE: Lipid analogs for treating viral infections
 INVENTOR(S): Kucera, Louis S.; Morris-Natschke, Susan L.; Ishaq, Khalid S.
 PATENT ASSIGNEE(S): Wake Forest University, USA; Univ. of North Carolina at Chapel Hill
 SOURCE: PCT Int. Appl., 53 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|------|----------|-----------------|----------|
| WO 9606620 | A2 | 19960307 | WO 1995-US10111 | 19950807 |
| WO 9606620 | A3 | 19960613 | | |
| W: AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LT, LU, LV, MD, MG, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TT | | | | |
| RW: KE, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG | | | | |
| CA 2197319 | A1 | 19960307 | CA 1995-2197319 | 19950807 |
| AU 9532166 | A | 19960322 | AU 1995-32166 | 19950807 |
| EP 781138 | A2 | 19970702 | EP 1995-928365 | 19950807 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, NL, PT, SE | | | | |
| JP 10506619 | T | 19980630 | JP 1995-508773 | 19950807 |
| EP 1852121 | A2 | 20071107 | EP 2007-16369 | 19950807 |
| EP 1852121 | A3 | 20071121 | | |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, NL, PT, SE | | | | |
| US 5962437 | A | 19991005 | US 1997-793470 | 19970502 |
| US 7129227 | B1 | 20061031 | US 1999-412539 | 19991004 |
| US 2004259845 | A1 | 20041223 | US 2004-889127 | 20040713 |
| US 7135584 | B2 | 20061114 | | |
| US 2005080050 | A1 | 20050414 | US 2004-943923 | 20040920 |
| US 7141557 | B2 | 20061128 | | |
| JP 2007056033 | A | 20070308 | JP 2006-278049 | 20061011 |
| US 2007099870 | A1 | 20070503 | US 2006-588313 | 20061027 |
| US 7294621 | B2 | 20071113 | | |
| US 2007105811 | A1 | 20070510 | US 2006-588308 | 20061027 |
| US 7294619 | B2 | 20071113 | | |
| US 2007105812 | A1 | 20070510 | US 2006-588311 | 20061027 |
| US 7294620 | B2 | 20071113 | | |

PRIORITY APPLN. INFO.:
 US 1994-297416 A 19940829
 US 1994-314901 A 19940929
 EP 1995-928365 A3 19950807
 JP 1996-508773 A3 19950807
 WO 1995-US10111 W 19950807
 US 1997-793470 A3 19970502
 US 1999-412539 B1 19991004
 US 2004-889127 A3 20040713
 US 2004-943923 A3 20040920

OTHER SOURCE(S): MARPAT 125:49273

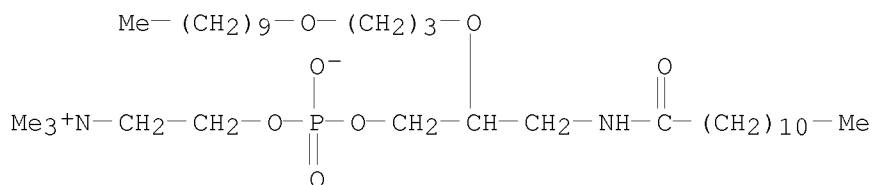
AB A method of treating viral infections, in particular with HIV-1, hepatitis B virus, and herpes viruses, is disclosed. The method comprising administering to a subject in need of such treatment an infection-combating amount of a phospholipid or phospholipid derivative. For example, 1-dodecanamido-2-decylpropyl-3-phosphocholine showed IC50 value of 0.14 μ M against HIV-1 syncytial plaque formation.
 IT 178172-98-0 178172-99-1 178173-00-7
 178173-01-8

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(phospholipids for treating viral infections and tumors)

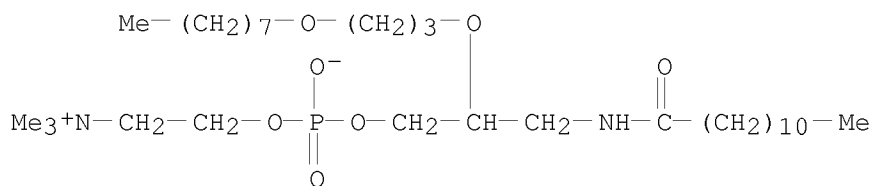
RN 178172-98-0 CAPLUS

CN 3,5-Dioxa-9-aza-4-phosphaheneicosan-1-aminium, 7-[3-(decyloxy)propoxy]-4-hydroxy-N,N,N-trimethyl-10-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



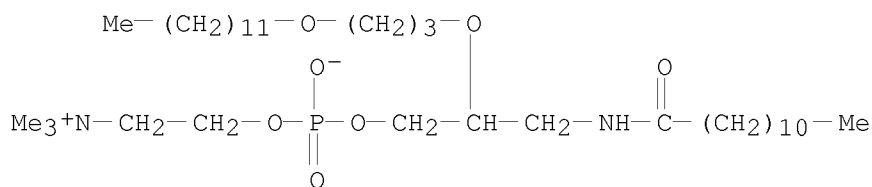
RN 178172-99-1 CAPLUS

CN 3,5-Dioxa-9-aza-4-phosphaheneicosan-1-aminium, 4-hydroxy-N,N,N-trimethyl-7-[3-(octyloxy)propoxy]-10-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



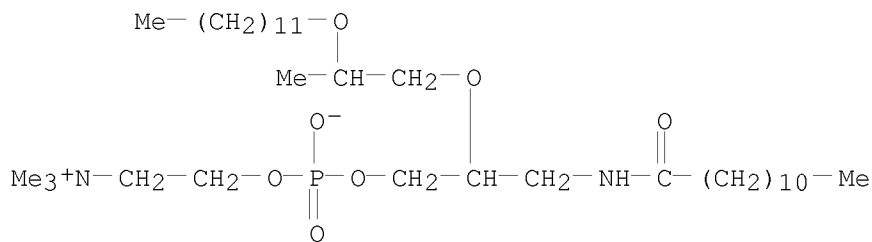
RN 178173-00-7 CAPLUS

CN 3,5-Dioxa-9-aza-4-phosphaheneicosan-1-aminium, 7-[3-(dodecyloxy)propoxy]-4-hydroxy-N,N,N-trimethyl-10-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



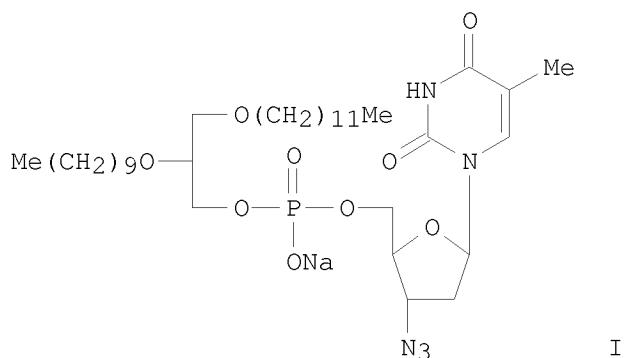
RN 178173-01-8 CAPLUS

CN 3,5-Dioxa-9-aza-4-phosphaheneicosan-1-aminium, 7-[2-(dodecyloxy)propoxy]-4-hydroxy-N,N,N-trimethyl-10-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



L4 ANSWER 8 OF 23 CAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 1995:701769 CAPLUS
 DOCUMENT NUMBER: 123:112632
 TITLE: Phospholipids for combating hepatitis B virus infection
 INVENTOR(S): Kucera, Louis S.; Morris-Natschke, Susan L.
 PATENT ASSIGNEE(S): Wake Forest University, USA; University of North Carolina
 SOURCE: PCT Int. Appl., 38 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 2
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------------------|--|----------|-----------------|------------|
| ----- | ---- | ----- | ----- | ----- |
| WO 9428908 | A2 | 19941222 | WO 1994-US5855 | 19940525 |
| WO 9428908 | A3 | 19950323 | | |
| W: | AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, ES, FI, GB, GE, HU, JP, KG, KP, KR, KZ, LK, LU, LV, MD, MG, MN, MW, NL, NO, NZ, PL, PT, RO, RU, SD, SE, SI, SK, TJ, TT, UA, US, UZ, VN | | | |
| RW: | AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG | | | |
| CA 2164717 | A1 | 19941222 | CA 1994-2164717 | 19940525 |
| AU 9470448 | A | 19950103 | AU 1994-70448 | 19940525 |
| EP 702556 | A1 | 19960327 | EP 1994-919231 | 19940525 |
| EP 702556 | B1 | 20021023 | | |
| R: | AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, NL, PT, SE | | | |
| AT 226437 | T | 20021115 | AT 1994-919231 | 19940525 |
| PRIORITY APPLN. INFO.: | | | US 1993-74943 | A 19930610 |
| | | | WO 1994-US5855 | W 19940525 |
| OTHER SOURCE(S): | MARPAT 123:112632 | | | |
| GI | | | | |

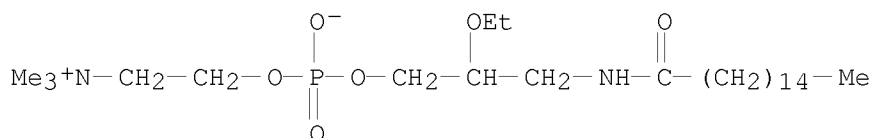


AB A method of treating infection with hepatitis B virus is disclosed. The method comprises administration of alkyl ether phospholipids and derivs. of formula DCH₂XCH₂YR₁ [Y = S, O, NH, NMe, NHCO, NMeCO; R₁ = (un)branched (un)saturated C₁₀₋₂₀ alk(en/yn)yl; X = bond, CH₂ (un)substituted by OH, alkyl, alkoxy, or alkylthio; D = (PO₄)-E, N+R₅R₆FW Z-; E = (mono/di/trialkyl)ammonioalkyl or a nucleic acid base conjugate; F = alkylene; R₅, R₆ = H, alkyl; W = OH, SH; Z- = anion]. Several compds. were prepared For example, etherification of isopropylidenglycerol with 1-bromododecane using KOH in PhMe and acid hydrolysis with HCl in MeOH-Et₂O mixture gave 71% 3-dodecyloxy-1,2-propanediol. This underwent 1-O-tritylation with Ph₃CCl in pyridine, 2-O-alkylation by 1-bromodecane and NaH in THF (51%), and detritylation by p-MeC₆H₄SO₃H in CHCl₃-MeOH (63%) to give 3-dodecyloxy-2-decyloxy-1-propanol. The latter underwent esterification with (PhO)₂P(O)Cl (60%), hydrogenolysis of the Ph ester to the phosphatidic acid, and reesterification with AZT using DCC (22%) to give title compound (Na salt) I. Another compound, (±)-3-octadecanamido-2-ethoxypropyl-1-phosphocholine, inhibited HBV virion DNA and intracellular RI HBV DNA in expts. to a comparable or greater extent than the standard agent ddC.

IT 112989-01-2P 112989-02-3P
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
 (preparation of phospholipids for combating hepatitis B virus)

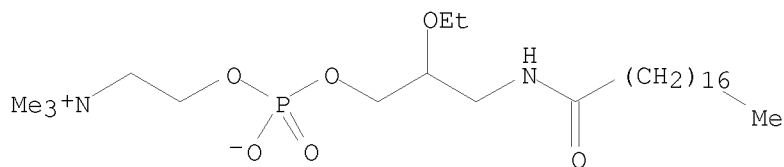
RN 112989-01-2 CAPLUS

CN 3,5-Dioxa-9-aza-4-phosphapentacosan-1-aminium, 7-ethoxy-4-hydroxy-N,N,N-trimethyl-10-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



RN 112989-02-3 CAPLUS

CN 3,5-Dioxa-9-aza-4-phosphaheptacosan-1-aminium, 7-ethoxy-4-hydroxy-N,N,N-trimethyl-10-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



L4 ANSWER 9 OF 23 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1995:694404 CAPLUS

DOCUMENT NUMBER: 123:160151

TITLE: Membrane-interactive phospholipids inhibit HIV type 1-induced cell fusion and surface gp160/ gp120 binding to monoclonal antibody

AUTHOR(S): Krugner-Higby, Lisa; Goff, David; Edwards, Terri; Iyer, Nathan; Neufeld, Jay; Kute, Timothy; Morris-Natschke, Susan; Ishaq, Khalid; Piantadosi, Claude; Kucera, Louis S.

CORPORATE SOURCE: Wake Forest University, Winsto-Salem, NC, 27157-1064, USA

SOURCE: AIDS Research and Human Retroviruses (1995), 11(6), 705-12

CODEN: ARHRE7; ISSN: 0889-2229

PUBLISHER: Liebert

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Membrane-interactive phospholipids (PLs), previously evaluated for activity against HIV-1 in vitro, are known to affect late steps in viral replication. Studies were done to determine the effects of PL analogs on post-translational processing of HIV-1 proteins, binding of viral surface gp160/gp120 to CD4 receptor, and HIV-1-induced cell fusion. Results of this investigation indicated that PL alone (1-octadecanamido-2-ethoxypropyl-rac-3-phosphocholine, CP-51) and PL-AZT conjugate (1-octadecanamido-2-ethoxypropyl-rac-3-phospho-3'-azido-3'-deoxythymidine, CP-92) have no effect on HIV-1-induced syntheses or processing of gp160/gp120, pr51, p24, or p17 (including myristoylation) in infected cells. Progeny HIV-1 particles made in CP-92-treated H9IIIB cells contained gp120, pr51, and p24; however, these virus particles had reduced capacity to bind to CD4+ cells. Both CP-51 and CP-92 inhibited syncytium (cell fusion) formation between treated HIV-1-infected cells and uninfected CD4+ cells, and, they reduced HIV-1 gp160/gp120 binding to CD4+ cells and monoclonal antibody. These results suggest that anti-HIV-1 activity of PL compds. involves alteration of cell surface membranes and viral envelopes. Phospholipid compds. are a novel class of membrane interactive compds. with potential use in blocking the spread of HIV-1 infection and pathogenesis in AIDS.

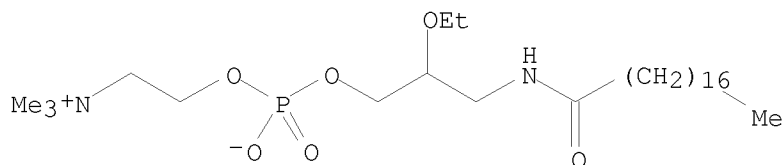
IT 112989-02-3, CP 51

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(membrane-interactive phospholipids inhibit HIV type 1-induced cell fusion and surface gp160/ gp120 binding to monoclonal antibody)

RN 112989-02-3 CAPLUS

CN 3,5-Dioxa-9-aza-4-phosphaheptacosan-1-aminium, 7-ethoxy-4-hydroxy-N,N,N-trimethyl-10-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



L4 ANSWER 10 OF 23 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1991:185901 CAPLUS

DOCUMENT NUMBER: 114:185901

TITLE: Synthesis and evaluation of novel ether lipid nucleoside conjugates for anti-HIV-1 activity

AUTHOR(S): Piantadosi, Claude; Marasco, Canio J., Jr.; Morris-Natschke, Susan L.; Meyer, Karen L.; Gumus, Fatma; Surles, Jefferson R.; Ishaq, Khalid S.; Kucera, Louis S.; Iyer, Nathan; et al.

CORPORATE SOURCE: Sch. Pharm., Univ. North Carolina, Chapel Hill, NC, 27599, USA

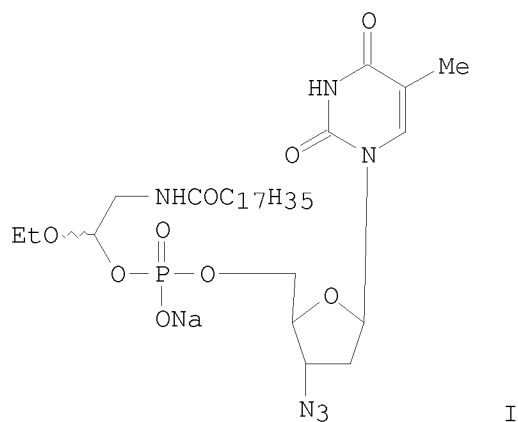
SOURCE: Journal of Medicinal Chemistry (1991), 34(4), 1408-14
CODEN: JMCMAR; ISSN: 0022-2623

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 114:185901

GI



I

AB Combinations of an amidoalkylphosphocholine, C17H35CONHCH2CH(OEt)CH2OP(O)(O-)OCH2CH2N+Me3, and AZT were found to cause an apparent synergistic action in suppressing infectious HIV-1 replication. In addition, alkylamido, alkyloxy, and alkylthio ether lipids were chemical linked to anti-HIV-1 nucleosides (AZT and DDI) through phosphate and phosphonate linkages. These conjugates show promising in vitro anti-HIV-1 activity. Also, the conjugates have a 5-10-fold reduction in cell cytotoxicity compared to AZT alone. The most active compound, an alkylamido ether lipid-AZT conjugate, I was found to have a differential selectivity of 1793 in a syncytial plaque assay. In comparison, AZT alone has a value of 1281.

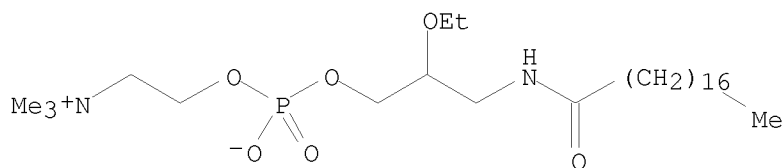
IT 112989-02-3

RL: RCT (Reactant); RACT (Reactant or reagent)
(anti-HIV-1 activity of)

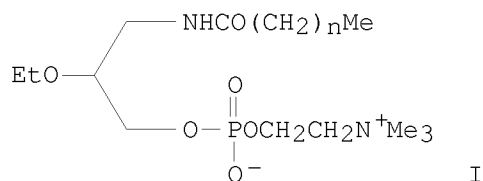
RN 112989-02-3 CAPLUS

CN 3,5-Dioxa-9-aza-4-phosphaheptacosan-1-aminium, 7-ethoxy-4-hydroxy-N,N,N-

trimethyl-10-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



L4 ANSWER 11 OF 23 CAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 1991:185881 CAPLUS
 DOCUMENT NUMBER: 114:185881
 TITLE: In vitro evaluation of phosphocholine and quaternary ammonium containing lipids as novel anti-HIV agents
 AUTHOR(S): Meyer, Karen L.; Marasco, Canino J., Jr.; Morris-Natschke, Susan L.; Ishaq, Khalid S.; Piantadosi, Claude; Kucera, Louis S.
 CORPORATE SOURCE: Sch. Pharm., Univ. North Carolina, Chapel Hill, NC, 27599, USA
 SOURCE: Journal of Medicinal Chemistry (1991), 34(4), 1377-83
 CODEN: JMCMAR; ISSN: 0022-2623
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 OTHER SOURCE(S): CASREACT 114:185881
 GI

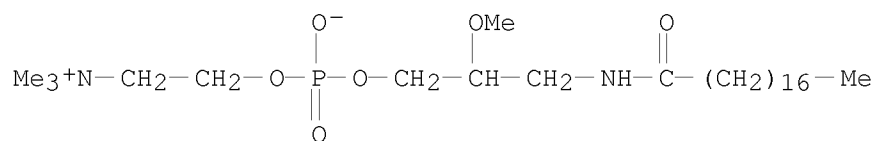


AB A series of synthetic lipids containing a two- or three-carbon backbone substituted with a thio, oxy, or amidoalkyl functionality and either a phosphocholine or quaternary ammonium moiety were evaluated as potential anti-HIV-1 agents. Several analogs were identified as possessing activity with the most promising compound being rac-3-octadecanamido-2-ethoxypropylphosphocholine (I). I exhibited an IC50 for the inhibition of plaque formation of 0.16 μ M which was 84-fold lower than the IC50 value determined for CEM-SS cell growth inhibition. Initial mechanistic studies have indicated that these compds., unlike AZT, are not reverse transcriptase (RT) inhibitors, but instead appear to inhibit a late step in HIV replication involving virus assembly and infectious virus production. Since these lipids are acting via a different, mechanism they represent an alternative approach to the chemotherapeutic treatment of AIDS as well as candidates for combination therapy with AZT.

IT 88876-07-7 112989-00-1 112989-01-2
 112989-02-3
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (anti-HIV-1 activity of)

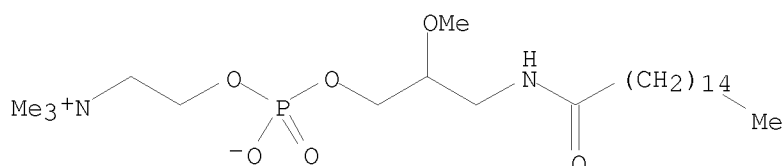
RN 88876-07-7 CAPLUS

CN 3,5-Dioxa-9-aza-4-phosphaheptacosan-1-aminium, 4-hydroxy-7-methoxy-N,N,N-trimethyl-10-oxo-, inner salt, 4-oxide (CA INDEX NAME)



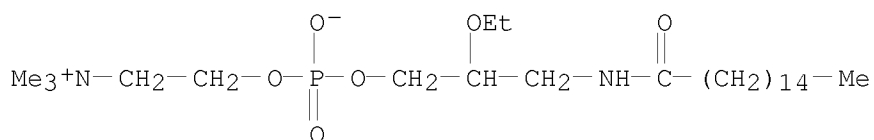
RN 112989-00-1 CAPLUS

CN 3,5-Dioxa-9-aza-4-phosphapentacosan-1-aminium, 4-hydroxy-7-methoxy-N,N,N-trimethyl-10-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



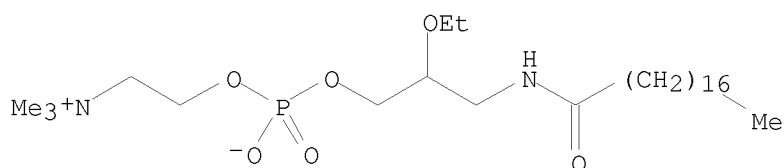
RN 112989-01-2 CAPLUS

CN 3,5-Dioxa-9-aza-4-phosphapentacosan-1-aminium, 7-ethoxy-4-hydroxy-N,N,N-trimethyl-10-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



RN 112989-02-3 CAPLUS

CN 3,5-Dioxa-9-aza-4-phosphaheptacosan-1-aminium, 7-ethoxy-4-hydroxy-N,N,N-trimethyl-10-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)

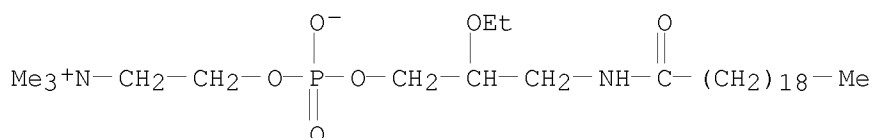


IT 149576-20-5P

RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation and anti-HIV-1 activity of)

RN 149576-20-5 CAPLUS

CN 3,5-Dioxa-9-aza-4-phosphanonacosan-1-aminium, 7-ethoxy-4-hydroxy-N,N,N-trimethyl-10-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



L4 ANSWER 12 OF 23 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1990:470710 CAPLUS

DOCUMENT NUMBER: 113:70710

TITLE: Novel membrane-interactive ether lipid analogs that inhibit infectious HIV-1 production and induce defective virus formation

AUTHOR(S): Kucera, Louis S.; Iyer, Nathan; Leake, Eva; Raben, Adam; Modest, Edward J.; Daniel, Larry W.; Piantadosi, Claude

CORPORATE SOURCE: Bowman Gray Sch. Med., Wake Forest Univ., Winston-Salem, NC, 27103, USA

SOURCE: AIDS Research and Human Retroviruses (1990), 6(4), 491-501

CODEN: ARHRE7; ISSN: 0889-2229

DOCUMENT TYPE: Journal

LANGUAGE: English

AB A new class of membrane-active ether lipid (EL) analogs of platelet-activating factor were studied for in vitro anti-HIV-1 activity. Human T-cell (CEM-ss) monolayers or suspension cultures were used to determine effects of structural modifications of Type A phosphorus-containing and Type B nonphosphorus EL analogs on (a) the inhibitory concn.50 (IC50) for HIV-1 syncytial plaque formation and cell growth, and, (b) virus budding at the cell plasma membrane. Results indicate that representative Type A and Type B EL inhibit HIV-1 but not herpes simplex virus type 2 plaque formation when added before or up to 2 days after viral infection. Anti-HIV-1 activity does not involve direct inactivation of virus infectivity. Type A EL (IC50 range = 0.2-1.4 μ M) with alkoxy, alkylthio, or alkyamido substitution at glycerol position 1 and ethoxy or methoxy substitution at position 2, and Type B compds. (IC50 range = 0.33-0.63 μ M) with an inverse choline or nitrogen heterocyclic substitution at position 3 have selective activity against HIV-1-infected T-cells. EL treatment of HIV-1-infected cells is associated with subsequent release of reverse transcriptase activity, but infectious virus production is inhibited with time after infection. Electron microscopic examination of HIV-1-infected and EL-treated cells revealed absence of detectable budding virus at the plasma membrane but presence of intracytoplasmic vacuolar virus particles. EL analogs are a novel class of agents that induce defective intracytoplasmic vacuolar HIV-1 formation in T-cells. Being membrane interactive, EL are ideally suited for combination chemotherapy with DNA-interactive anti-HIV nucleoside analogs.

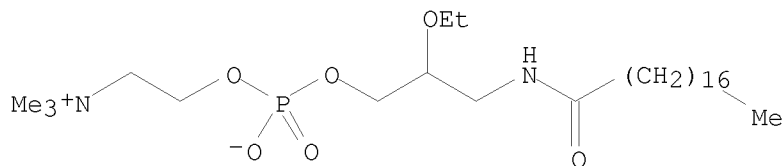
IT 112989-02-3

RL: BIOL (Biological study)

(human immunodeficiency virus infection response to)

RN 112989-02-3 CAPLUS

CN 3,5-Dioxa-9-aza-4-phosphaheptacosan-1-aminium, 7-ethoxy-4-hydroxy-N,N,N-trimethyl-10-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



L4 ANSWER 13 OF 23 USPATFULL on STN

ACCESSION NUMBER: 2007:121606 USPATFULL

TITLE: Lipid analogs for inhibiting HIV-1 activity

INVENTOR(S): Kucera, Louis S., Pfafftown, NC, UNITED STATES
 Morris-Natschke, Susan L., Apex, NC, UNITED STATES
 Ishaq, Khalid S., Chapel Hill, NC, UNITED STATES
 PATENT ASSIGNEE(S): Wake Forest University (U.S. corporation)

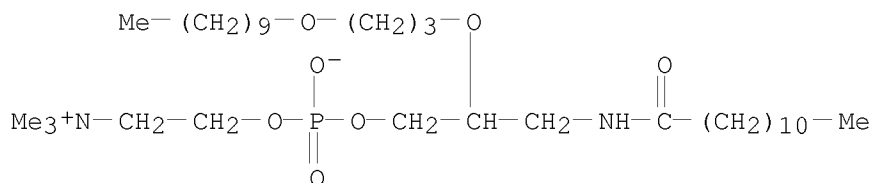
| | NUMBER | KIND | DATE |
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| PATENT INFORMATION: | US 2007105812 | A1 | 20070510 |
| | US 7294620 | B2 | 20071113 |
| APPLICATION INFO.: | US 2006-588311 | A1 | 20061027 (11) |
| RELATED APPLN. INFO.: | Division of Ser. No. US 1999-412539, filed on 4 Oct 1999, GRANTED, Pat. No. US 7129227 Division of Ser. No. US 1997-793470, filed on 2 May 1997, GRANTED, Pat. No. US 5962437 Continuation of Ser. No. US 1994-314901, filed on 29 Sep 1994, ABANDONED Continuation-in-part of Ser. No. US 1994-297416, filed on 29 Aug 1994, ABANDONED | | |
| DOCUMENT TYPE: | Utility | | |
| FILE SEGMENT: | APPLICATION | | |
| LEGAL REPRESENTATIVE: | MORGAN LEWIS & BOCKIUS LLP, 1111 PENNSYLVANIA AVENUE NW, WASHINGTON, DC, 20004, US | | |
| NUMBER OF CLAIMS: | 18 | | |
| EXEMPLARY CLAIM: | 1-106 | | |
| LINE COUNT: | 898 | | |

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

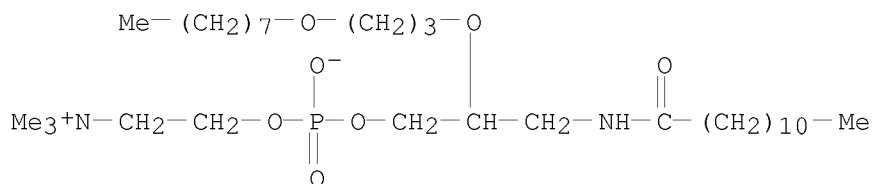
AB The invention relates to methods of treating viral infections, and in particular hepatitis B virus. The method comprises administering to a subject in need of such treatment an infection-controlling amount of a phospholipid or phospholipid derivative to inhibit the activity of the viral infection.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 178172-98-0 178172-99-1 178173-00-7
 178173-01-8
 (phospholipids for treating viral infections and tumors)
 RN 178172-98-0 USPATFULL
 CN 3,5-Dioxa-9-aza-4-phosphaheneicosan-1-aminium, 7-[3-(decyloxy)propoxy]-4-hydroxy-N,N,N-trimethyl-10-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)

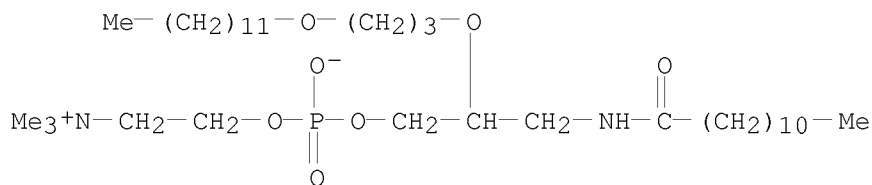


RN 178172-99-1 USPATFULL
 CN 3,5-Dioxa-9-aza-4-phosphaheneicosan-1-aminium, 4-hydroxy-N,N,N-trimethyl-7-[3-(octyloxy)propoxy]-10-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



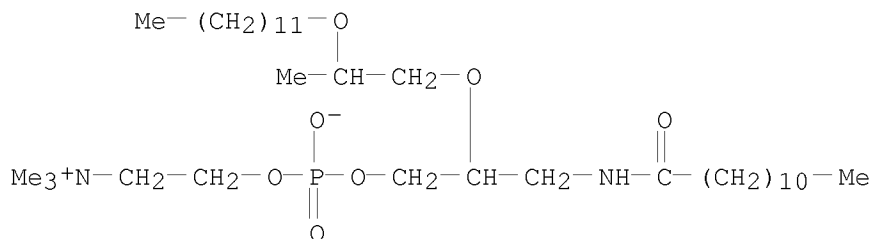
RN 178173-00-7 USPATFULL

CN 3,5-Dioxa-9-aza-4-phosphaheneicosan-1-aminium, 7-[3-(dodecyloxy)propoxy]-4-hydroxy-N,N,N-trimethyl-10-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



RN 178173-01-8 USPATFULL

CN 3,5-Dioxa-9-aza-4-phosphaheneicosan-1-aminium, 7-[2-(dodecyloxy)propoxy]-4-hydroxy-N,N,N-trimethyl-10-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



L4 ANSWER 14 OF 23 USPATFULL on STN

ACCESSION NUMBER: 2007:121605 USPATFULL

TITLE: Lipid analogs for inhibiting the activity of hepatitis B antigen

INVENTOR(S): Kucera, Louis S., Pfafftown, NC, UNITED STATES
Morris-Natschke, Susan L., Apex, NC, UNITED STATES
Ishaq, Khalid S., Chapel Hill, NC, UNITED STATES

PATENT ASSIGNEE(S): Wake Forest University (U.S. corporation)
University of North Carolina at Chapel Hill (U.S. corporation)

| | NUMBER | KIND | DATE |
|-----------------------|---|------|---------------|
| PATENT INFORMATION: | US 2007105811 | A1 | 20070510 |
| | US 7294619 | B2 | 20071113 |
| APPLICATION INFO.: | US 2006-588308 | A1 | 20061027 (11) |
| RELATED APPLN. INFO.: | Division of Ser. No. US 2004-889127, filed on 13 Jul 2004, GRANTED, Pat. No. US 7135584 Division of Ser. No. US 1999-412539, filed on 4 Oct 1999, GRANTED, Pat. No. US 7129227 Division of Ser. No. US 1997-793470, filed | | |

on 2 May 1997, GRANTED, Pat. No. US 5962437
 Continuation of Ser. No. US 1994-314901, filed on 29
 Sep 1994, ABANDONED Continuation-in-part of Ser. No. US
 1994-297416, filed on 29 Aug 1994, ABANDONED

DOCUMENT TYPE: Utility
 FILE SEGMENT: APPLICATION
 LEGAL REPRESENTATIVE: MORGAN LEWIS & BOCKIUS LLP, 1111 PENNSYLVANIA AVENUE
 NW, WASHINGTON, DC, 20004, US
 NUMBER OF CLAIMS: 20
 EXEMPLARY CLAIM: 1-106
 LINE COUNT: 899

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The invention relates to methods of treating viral infections, and in
 particular hepatitis B virus. The method comprises
 administering to a subject in need of such treatment an
 infection-controlling amount of a phospholipid or phospholipid
 derivative to inhibit the activity of the viral infection.

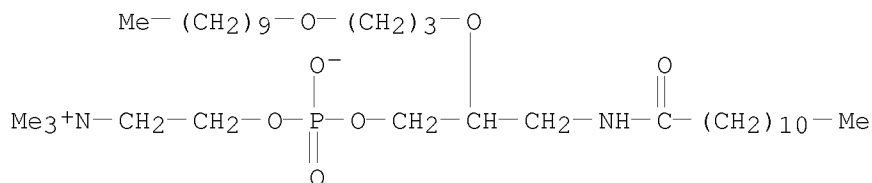
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 178172-98-0 178172-99-1 178173-00-7
 178173-01-8

(phospholipids for treating viral infections and tumors)

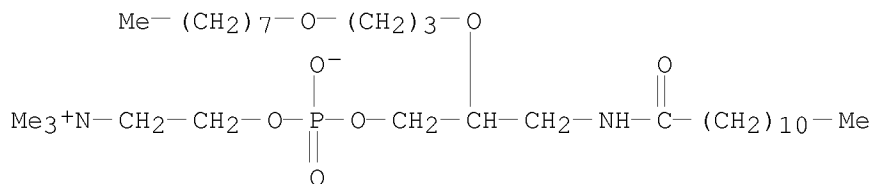
RN 178172-98-0 USPATFULL

CN 3,5-Dioxa-9-aza-4-phosphaheneicosan-1-aminium, 7-[3-(decyloxy)propoxy]-4-
 hydroxy-N,N,N-trimethyl-10-oxo-, inner salt, 4-oxide (9CI) (CA INDEX
 NAME)



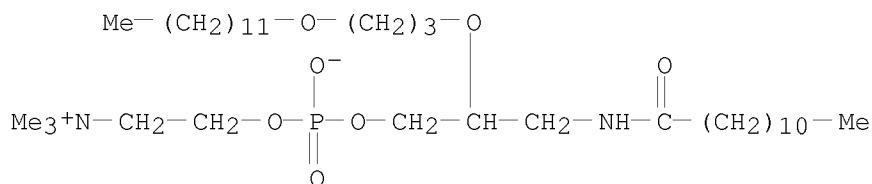
RN 178172-99-1 USPATFULL

CN 3,5-Dioxa-9-aza-4-phosphaheneicosan-1-aminium, 4-hydroxy-N,N,N-trimethyl-7-
 [3-(octyloxy)propoxy]-10-oxo-, inner salt, 4-oxide (9CI) (CA INDEX
 NAME)



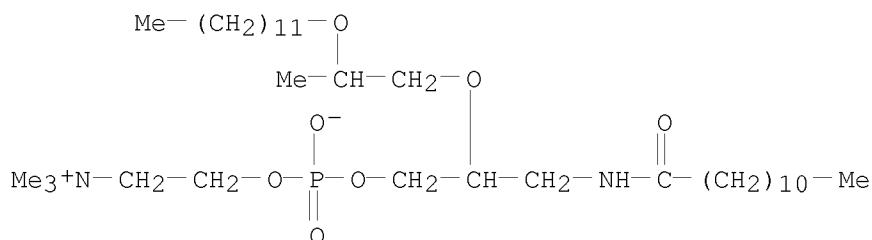
RN 178173-00-7 USPATFULL

CN 3,5-Dioxa-9-aza-4-phosphaheneicosan-1-aminium, 7-[3-(dodecyloxy)propoxy]-4-
 hydroxy-N,N,N-trimethyl-10-oxo-, inner salt, 4-oxide (9CI) (CA INDEX
 NAME)



RN 178173-01-8 USPATFULL

CN 3,5-Dioxa-9-aza-4-phosphaheneicosan-1-aminium, 7-[2-(dodecyloxy)propoxy]-4-hydroxy-N,N,N-trimethyl-10-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



L4 ANSWER 15 OF 23 USPATFULL on STN

ACCESSION NUMBER: 2007:114796 USPATFULL

TITLE: Lipid analogs for combating tumors

INVENTOR(S): Kucera, Louis S., Pfafftown, NC, UNITED STATES
Morris-Natschke, Susan L., Apex, NC, UNITED STATES
Ishaq, Khalid S., Chapel Hill, NC, UNITED STATES

PATENT ASSIGNEE(S): Wake Forest University (U.S. corporation)

| | NUMBER | KIND | DATE |
|-----------------------|---|------|---------------|
| | ----- | ---- | ----- |
| PATENT INFORMATION: | US 2007099870 | A1 | 20070503 |
| | US 7294621 | B2 | 20071113 |
| APPLICATION INFO.: | US 2006-588313 | A1 | 20061027 (11) |
| RELATED APPLN. INFO.: | Division of Ser. No. US 2004-943923, filed on 20 Sep 2004, GRANTED, Pat. No. US 7141557 Continuation of Ser. No. US 1999-412539, filed on 4 Oct 1999, GRANTED, Pat. No. US 7129227 Division of Ser. No. US 1997-793470, filed on 2 May 1997, GRANTED, Pat. No. US 5962437 Continuation of Ser. No. US 1994-314901, filed on 29 Sep 1994, ABANDONED Continuation-in-part of Ser. No. US 1994-297416, filed on 29 Aug 1994, ABANDONED | | |
| DOCUMENT TYPE: | Utility | | |
| FILE SEGMENT: | APPLICATION | | |
| LEGAL REPRESENTATIVE: | MORGAN LEWIS & BOCKIUS LLP, 1111 PENNSYLVANIA AVENUE NW, WASHINGTON, DC, 20004, US | | |
| NUMBER OF CLAIMS: | 19 | | |
| EXEMPLARY CLAIM: | 1-106 | | |
| LINE COUNT: | 900 | | |

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The invention relates to methods of treating viral infections, and in particular hepatitis B virus. The method comprises administering to a subject in need of such treatment an infection-controlling amount of a phospholipid or phospholipid derivative to inhibit the activity of the viral infection.

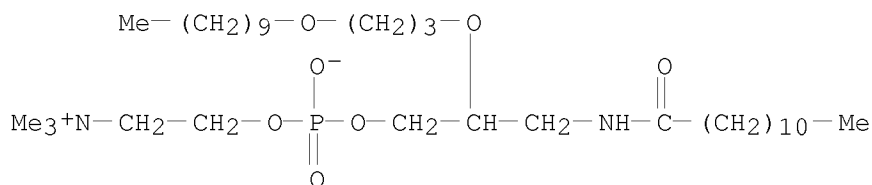
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 178172-98-0 178172-99-1 178173-00-7
178173-01-8

(phospholipids for treating viral infections and tumors)

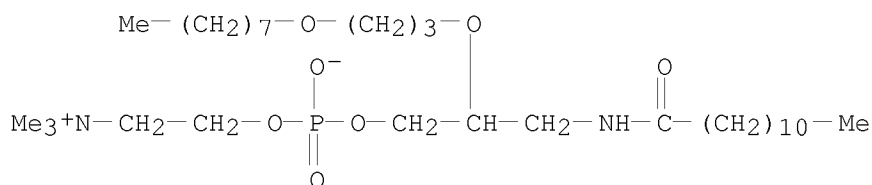
RN 178172-98-0 USPTAFULL

CN 3,5-Dioxa-9-aza-4-phosphaheneicosan-1-aminium, 7-[3-(decyloxy)propoxy]-4-hydroxy-N,N,N-trimethyl-10-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



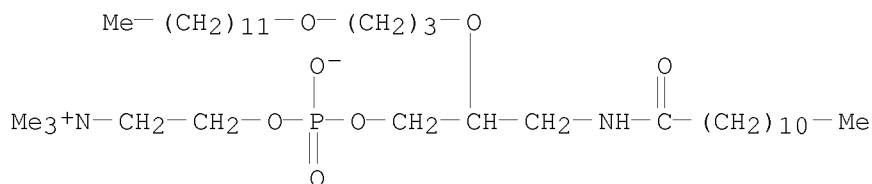
RN 178172-99-1 USPTAFULL

CN 3,5-Dioxa-9-aza-4-phosphaheneicosan-1-aminium, 4-hydroxy-N,N,N-trimethyl-7-[3-(octyloxy)propoxy]-10-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



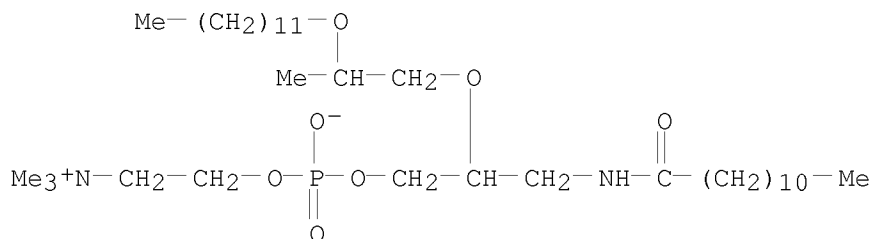
RN 178173-00-7 USPTAFULL

CN 3,5-Dioxa-9-aza-4-phosphaheneicosan-1-aminium, 7-[3-(dodecyloxy)propoxy]-4-hydroxy-N,N,N-trimethyl-10-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



RN 178173-01-8 USPTAFULL

CN 3,5-Dioxa-9-aza-4-phosphaheneicosan-1-aminium, 7-[2-(dodecyloxy)propoxy]-4-hydroxy-N,N,N-trimethyl-10-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



L4 ANSWER 16 OF 23 USPATFULL on STN

ACCESSION NUMBER: 2006:284487 USPATFULL

TITLE: Lipid analogs for treating viral infections

INVENTOR(S): Kucera, Louis S., Pfafftown, NC, UNITED STATES
Morris-Natschke, Susan L., Apex, NC, UNITED STATES
Ishaq, Khalid S., Chapel Hill, NC, UNITED STATES

PATENT ASSIGNEE(S): Wake Forest University, Winston Salem, NC, UNITED STATES (U.S. corporation)
University of North Carolina at Chapel Hill, Chapel Hill, NC, UNITED STATES (U.S. corporation)

| | NUMBER | KIND | DATE |
|-----------------------|---|------|--------------|
| PATENT INFORMATION: | US 7129227 | B1 | 20061031 |
| APPLICATION INFO.: | US 1999-412539 | | 19991004 (9) |
| RELATED APPLN. INFO.: | Division of Ser. No. US 2003-793470, Pat. No. US 5962437 A 371 of International Ser. No. WO 1995-US10111, filed on 7 Aug 1995 Continuation of Ser. No. US 1994-314901, filed on 29 Sep 1994, ABANDONED Continuation-in-part of Ser. No. US 1994-297416, filed on 29 Aug 1994, ABANDONED | | |
| DOCUMENT TYPE: | Utility | | |
| FILE SEGMENT: | GRANTED | | |
| PRIMARY EXAMINER: | Coleman, Brenda | | |
| LEGAL REPRESENTATIVE: | Morgan Lewis & Bockius LLP | | |
| NUMBER OF CLAIMS: | 24 | | |
| EXEMPLARY CLAIM: | 1 | | |
| LINE COUNT: | 1259 | | |

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A method of treating viral infections, and in particular HIV-1, hepatitis B virus, and herpesviruses, is disclosed.
The method comprises administering to a subject in need of such treatment an infection-combating amount of a phospholipid or phospholipid derivative.

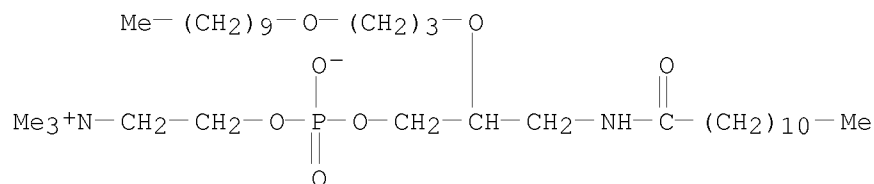
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 178172-98-0 178172-99-1 178173-00-7
178173-01-8

(phospholipids for treating viral infections and tumors)

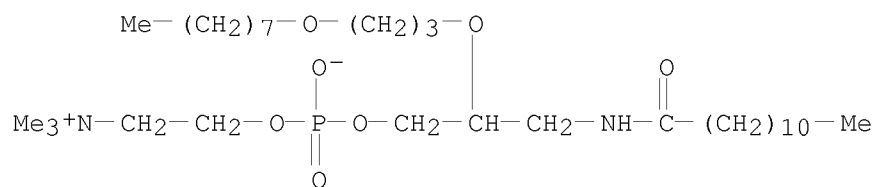
RN 178172-98-0 USPATFULL

CN 3,5-Dioxa-9-aza-4-phosphaheneicosan-1-aminium, 7-[3-(decyloxy)propoxy]-4-hydroxy-N,N,N-trimethyl-10-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



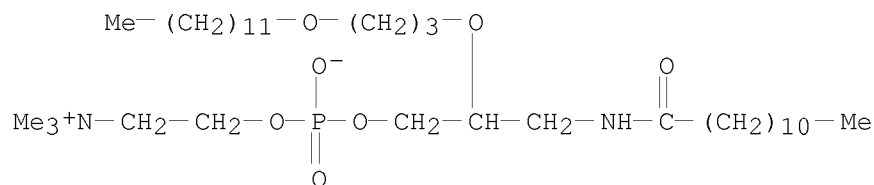
RN 178172-99-1 USPATFULL

CN 3,5-Dioxa-9-aza-4-phosphaheneicosan-1-aminium, 4-hydroxy-N,N,N-trimethyl-7-[3-(octyloxy)propoxy]-10-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



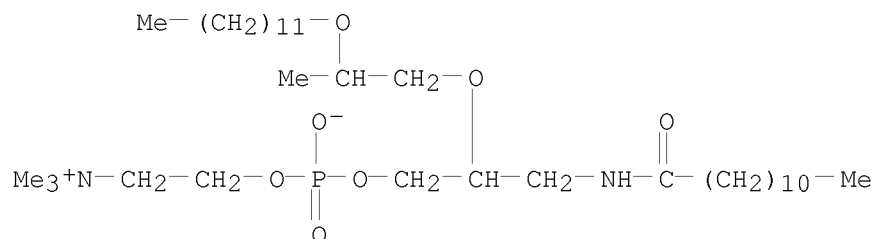
RN 178173-00-7 USPATFULL

CN 3,5-Dioxa-9-aza-4-phosphaheneicosan-1-aminium, 7-[3-(dodecyloxy)propoxy]-4-hydroxy-N,N,N-trimethyl-10-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



RN 178173-01-8 USPATFULL

CN 3,5-Dioxa-9-aza-4-phosphaheneicosan-1-aminium, 7-[2-(dodecyloxy)propoxy]-4-hydroxy-N,N,N-trimethyl-10-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



L4 ANSWER 17 OF 23 USPATFULL on STN

ACCESSION NUMBER: 2005:215516 USPATFULL

TITLE: Phospholipids for the treatment of infection by
togaviruses, herpes viruses and
coronaviruses

INVENTOR(S): Fleming, Ronald A., Cary, NC, UNITED STATES
Hes, Jan V., Hurdle Mills, NC, UNITED STATES
Huang, Yunsheng, Apex, NC, UNITED STATES
Read, Russ H., Rural Hall, NC, UNITED STATES
Morris-Natschke, Susan L., Apex, NC, UNITED STATES
Ishaq, Khalid S., Chapel Hill, NC, UNITED STATES
Kucera, Louis S., Pfafftown, NC, UNITED STATES
Furman, Phillip A., Durham, NC, UNITED STATES
PATENT ASSIGNEE(S): Kucera Pharmaceutical Company (U.S. corporation)

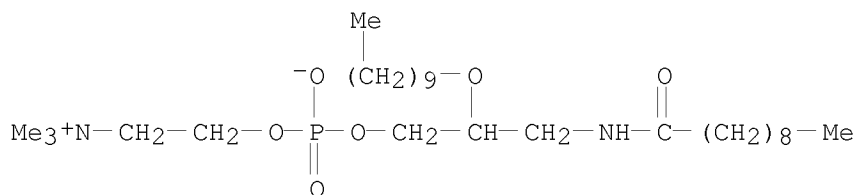
| | NUMBER | KIND | DATE |
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| PATENT INFORMATION: | US 2005187192 | A1 | 20050825 |
| APPLICATION INFO.: | US 2004-783927 | A1 | 20040220 (10) |
| DOCUMENT TYPE: | Utility | | |
| FILE SEGMENT: | APPLICATION | | |
| LEGAL REPRESENTATIVE: | Madeline I. Johnston, Esq., KING & SPALDING LLP, 45th Floor, 191 Peachtree Street, N.E., Atlanta, GA, 30303, US | | |
| NUMBER OF CLAIMS: | 65 | | |
| EXEMPLARY CLAIM: | 1 | | |
| NUMBER OF DRAWINGS: | 2 Drawing Page(s) | | |
| LINE COUNT: | 2757 | | |

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

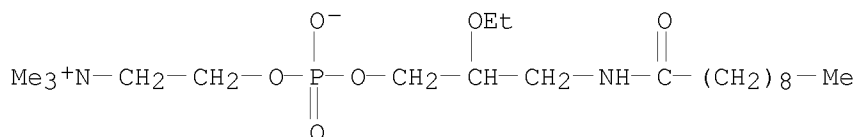
AB Provided are compounds, methods and pharmaceutical compositions for treating a host, especially a human, infected with a togavirus, herpes virus and/or coronavirus, and in particular SARS-CoV, cytomegalovirus or varicella-zoster virus. The method in one embodiment comprises administering to that host an effective amount of an anti-togavirus, anti-herpes virus and/or anti-coronavirus phospholipid or a pharmaceutically acceptable salt or prodrug thereof. The phospholipid compound is, e.g., a 3-alkylamido-2-alkoxypropylphosphocholine compound or salt thereof. The compound may be administered alone or in combination and/or alternation with one or more other anti-viral agents.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 252371-27-0 443882-90-4 443882-91-5
(phospholipids for treatment of infection by togaviruses, herpes viruses and coronaviruses)
RN 252371-27-0 USPATFULL
CN 3,5-Dioxa-9-aza-4-phosphanadecan-1-aminium, 7-(decyloxy)-4-hydroxy-N,N,N-trimethyl-10-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)

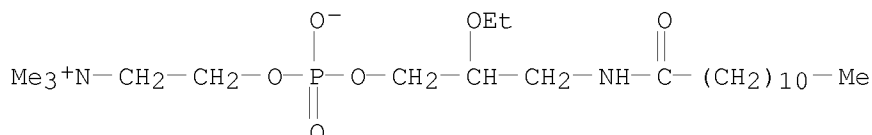


RN 443882-90-4 USPATFULL
CN 3,5-Dioxa-9-aza-4-phosphanadecan-1-aminium, 7-ethoxy-4-hydroxy-N,N,N-trimethyl-10-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



RN 443882-91-5 USPATFULL

CN 3,5-Dioxa-9-aza-4-phosphaheneicosan-1-aminium, 7-ethoxy-4-hydroxy-N,N,N-trimethyl-10-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



L4 ANSWER 18 OF 23 USPATFULL on STN

ACCESSION NUMBER: 2005:215515 USPATFULL

TITLE: Methods and compositions for the treatment of respiratory syncytial virus

INVENTOR(S): Kucera, Louis S., Pfafftown, NC, UNITED STATES
Morris-Natschke, Susan L., Apex, NC, UNITED STATES
Ishaq, Khalid S., Chapel Hill, NC, UNITED STATES
Fleming, Ronald A., Cary, NC, UNITED STATES
Hess, Jan V., Hurdle Mills, NC, UNITED STATES
Huang, Yunsheng, Apex, NC, UNITED STATES
Read, Russ H., Rural Hall, NC, UNITED STATES
Furman, Phillip A., Durham, NC, UNITED STATES

| | NUMBER | KIND | DATE |
|-----------------------|---|------|---------------|
| PATENT INFORMATION: | US 2005187191 | A1 | 20050825 |
| APPLICATION INFO.: | US 2004-781894 | A1 | 20040220 (10) |
| DOCUMENT TYPE: | Utility | | |
| FILE SEGMENT: | APPLICATION | | |
| LEGAL REPRESENTATIVE: | MORGAN LEWIS & BOCKIUS LLP, 1111 PENNSYLVANIA AVENUE NW, WASHINGTON, DC, 20004, US | | |
| NUMBER OF CLAIMS: | 39 | | |
| EXEMPLARY CLAIM: | 1 | | |
| NUMBER OF DRAWINGS: | 1 Drawing Page(s) | | |
| LINE COUNT: | 2105 | | |

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The invention includes compounds useful for inhibiting RSV replication and treating a host infected with RSV. The invention also includes methods of treating a host infected with RSV by administering to the host an anti-RSV effective amount of a compound of the invention.

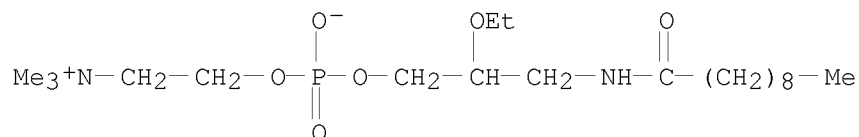
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 443882-90-4, KPC 11 443882-91-5, KPC 15

(compsn. for treatment of respiratory syncytial virus)

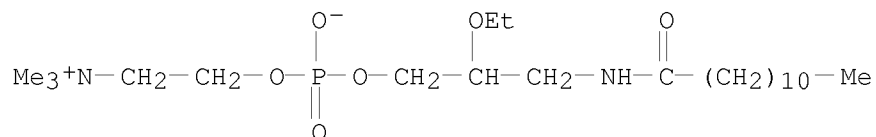
RN 443882-90-4 USPATFULL

CN 3,5-Dioxa-9-aza-4-phosphanonadecan-1-aminium, 7-ethoxy-4-hydroxy-N,N,N-trimethyl-10-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



RN 443882-91-5 USPATFULL

CN 3,5-Dioxa-9-aza-4-phosphaheneicosan-1-aminium, 7-ethoxy-4-hydroxy-N,N,N-trimethyl-10-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



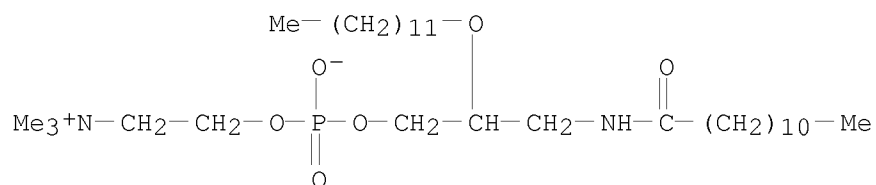
IT 207298-91-7 207298-93-9 252371-27-0

443882-96-0

(compns. for treatment of respiratory syncytial virus)

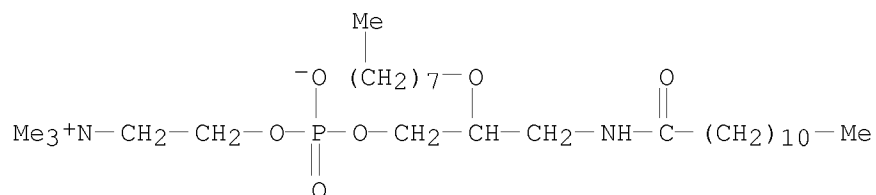
RN 207298-91-7 USPATFULL

CN 3,5-Dioxa-9-aza-4-phosphaheneicosan-1-aminium, 7-(dodecyloxy)-4-hydroxy-N,N,N-trimethyl-10-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



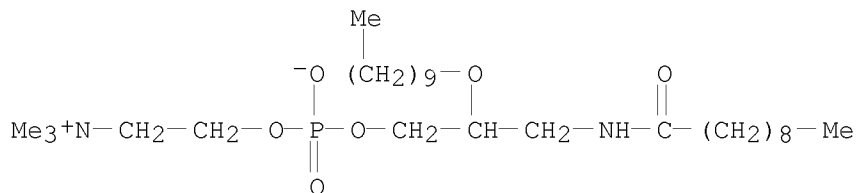
RN 207298-93-9 USPATFULL

CN 3,5-Dioxa-9-aza-4-phosphaheneicosan-1-aminium, 4-hydroxy-N,N,N-trimethyl-7-(octyloxy)-10-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)

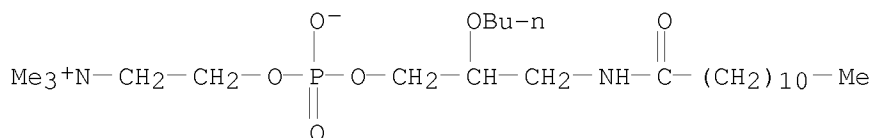


RN 252371-27-0 USPATFULL

CN 3,5-Dioxa-9-aza-4-phosphanonadecan-1-aminium, 7-(decyloxy)-4-hydroxy-N,N,N-trimethyl-10-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



RN 443882-96-0 USPTFULL
 CN 3,5-Dioxa-9-aza-4-phosphaheneicosan-1-aminium, 7-butoxy-4-hydroxy-N,N,N-trimethyl-10-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



L4 ANSWER 19 OF 23 USPTFULL on STN
 ACCESSION NUMBER: 2005:93372 USPTFULL
 TITLE: Lipid analogs for treating viral infections
 INVENTOR(S): Kucera, Louis S., Pfafftown, NC, UNITED STATES
 Morris-Natschke, Susan L., Apex, NC, UNITED STATES
 Ishaq, Khalid S., Chapel Hill, NC, UNITED STATES
 PATENT ASSIGNEE(S): Wake Forest University, Winston-Salem, NC, UNITED STATES (U.S. corporation)
 University of North Carolina at Chapel Hill, Chapel Hill, NC, UNITED STATES (U.S. corporation)

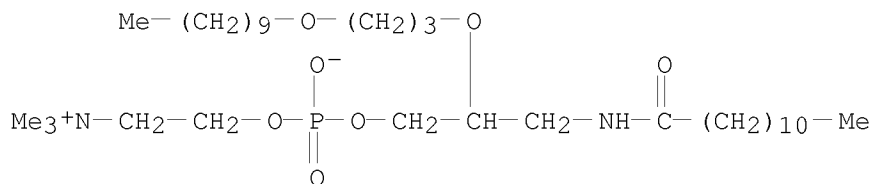
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| PATENT INFORMATION: | US 2005080050 | A1 | 20050414 |
| | US 7141557 | B2 | 20061128 |
| APPLICATION INFO.: | US 2004-943923 | A1 | 20040920 (10) |
| RELATED APPLN. INFO.: | Continuation of Ser. No. US 1999-412539, filed on 4 Oct 1999, PENDING Division of Ser. No. US 1997-793470, filed on 2 May 1997, GRANTED, Pat. No. US 5962437 A 371 of International Ser. No. WO 1995-US10111, filed on 7 Aug 1995 | | |
| DOCUMENT TYPE: | Utility | | |
| FILE SEGMENT: | APPLICATION | | |
| LEGAL REPRESENTATIVE: | MORGAN LEWIS & BOCKIUS LLP, 1111 PENNSYLVANIA AVENUE NW, WASHINGTON, DC, 20004, US | | |
| NUMBER OF CLAIMS: | 34 | | |
| EXEMPLARY CLAIM: | 1-106 | | |
| LINE COUNT: | 960 | | |

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
 AB A method of treating viral infections, and in particular HIV-1, hepatitis B virus, and herpes virus, is disclosed. The method comprises administering to a subject in need of such treatment an infection-controlling amount of a phospholipid or phospholipid derivative.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
 IT 178172-98-0 178172-99-1 178173-00-7
 178173-01-8
 (phospholipids for treating viral infections and tumors)

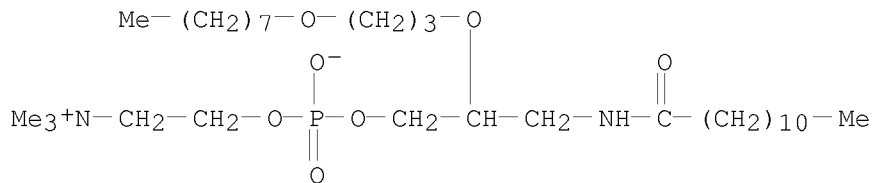
RN 178172-98-0 USPATFULL

CN 3,5-Dioxa-9-aza-4-phosphaheneicosan-1-aminium, 7-[3-(decyloxy)propoxy]-4-hydroxy-N,N,N-trimethyl-10-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



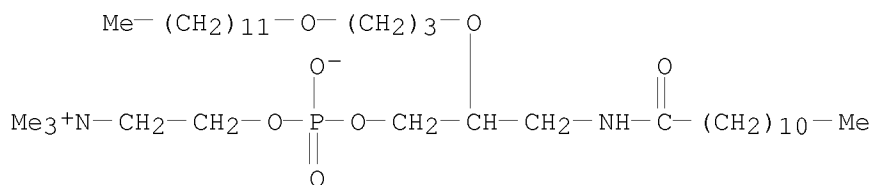
RN 178172-99-1 USPATFULL

CN 3,5-Dioxa-9-aza-4-phosphaheneicosan-1-aminium, 4-hydroxy-N,N,N-trimethyl-7-[3-(octyloxy)propoxy]-10-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



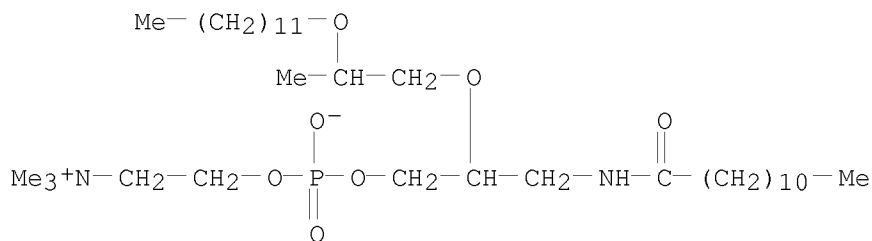
RN 178173-00-7 USPATFULL

CN 3,5-Dioxa-9-aza-4-phosphaheneicosan-1-aminium, 7-[3-(dodecyloxy)propoxy]-4-hydroxy-N,N,N-trimethyl-10-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



RN 178173-01-8 USPATFULL

CN 3,5-Dioxa-9-aza-4-phosphaheneicosan-1-aminium, 7-[2-(dodecyloxy)propoxy]-4-hydroxy-N,N,N-trimethyl-10-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



L4 ANSWER 20 OF 23 USPATFULL on STN

ACCESSION NUMBER: 2004:328020 USPATFULL

TITLE: Lipid analogs for treating viral infections

INVENTOR(S): Kucera, Louis S., Pfafftown, NC, UNITED STATES
Morris-Natschke, Susan L., Apex, NC, UNITED STATES
Ishaq, Khalid S., Chapel Hill, NC, UNITED STATES

PATENT ASSIGNEE(S): Wake Forest University, Winston-Salem, NC (U.S. corporation)
University of North Carolina at Chapel Hill, Chapel Hill, NC (U.S. corporation)

| | NUMBER | KIND | DATE |
|-----------------------|--|------|---------------|
| PATENT INFORMATION: | US 2004259845 | A1 | 20041223 |
| | US 7135584 | B2 | 20061114 |
| APPLICATION INFO.: | US 2004-889127 | A1 | 20040713 (10) |
| RELATED APPLN. INFO.: | Continuation of Ser. No. US 1999-412539, filed on 4 Oct 1999, ABANDONED Division of Ser. No. US 1997-793470, filed on 2 May 1997, GRANTED, Pat. No. US 5962437 A 371 of International Ser. No. WO 1995-US10111, filed on 7 Aug 1995, PENDING | | |
| DOCUMENT TYPE: | Utility | | |
| FILE SEGMENT: | APPLICATION | | |
| LEGAL REPRESENTATIVE: | MORGAN LEWIS & BOCKIUS LLP, 1111 PENNSYLVANIA AVENUE NW, WASHINGTON, DC, 20004 | | |
| NUMBER OF CLAIMS: | 19 | | |
| EXEMPLARY CLAIM: | CLM-1-106 | | |
| LINE COUNT: | 903 | | |

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A method of treating viral infections, and in particular HIV-1, hepatitis B virus, and herpes virus, is disclosed.
The method comprises administering to a subject in need of such treatment an infection-controlling amount of a phospholipid or phospholipid derivative.

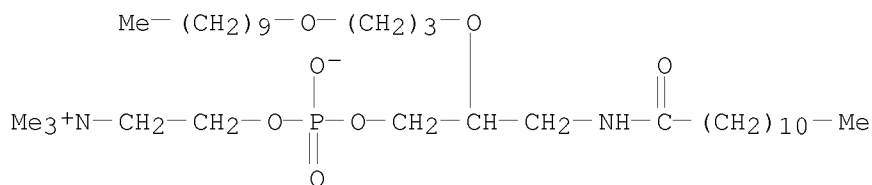
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 178172-98-0 178172-99-1 178173-00-7
178173-01-8

(phospholipids for treating viral infections and tumors)

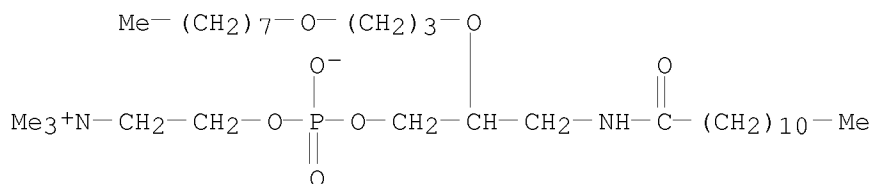
RN 178172-98-0 USPATFULL

CN 3,5-Dioxa-9-aza-4-phosphaheneicosan-1-aminium, 7-[3-(decyloxy)propoxy]-4-hydroxy-N,N,N-trimethyl-10-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



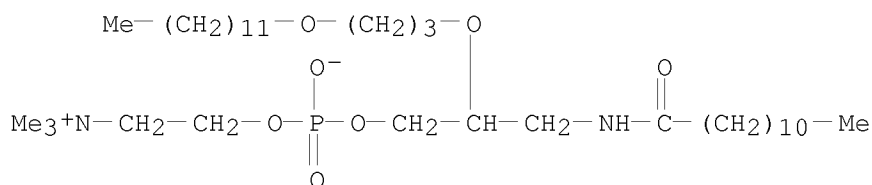
RN 178172-99-1 USPATFULL

CN 3,5-Dioxa-9-aza-4-phosphaheneicosan-1-aminium, 4-hydroxy-N,N,N-trimethyl-7-[3-(octyloxy)propoxy]-10-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



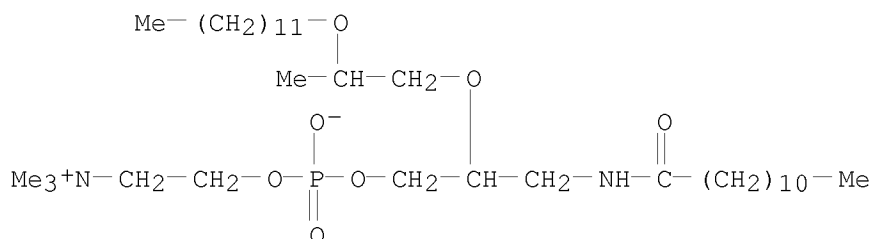
RN 178173-00-7 USPATFULL

CN 3,5-Dioxa-9-aza-4-phosphaheneicosan-1-aminium, 7-[3-(dodecyloxy)propoxy]-4-hydroxy-N,N,N-trimethyl-10-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



RN 178173-01-8 USPATFULL

CN 3,5-Dioxa-9-aza-4-phosphaheneicosan-1-aminium, 7-[2-(dodecyloxy)propoxy]-4-hydroxy-N,N,N-trimethyl-10-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



L4 ANSWER 21 OF 23 USPATFULL on STN

ACCESSION NUMBER: 2000:24634 USPATFULL

TITLE: Method of treating hepatitis virus infections

INVENTOR(S): Morris-Natschke, Susan L., Apex, NC, United States
Kucera, Louis S., Pfafftown, NC, United States

PATENT ASSIGNEE(S): Wake Forest University, Winston-Salem, NC, United States (U.S. corporation)
University of North Carolina at Chapel Hill, Chapel Hill, NC, United States (U.S. corporation)

| | NUMBER | KIND | DATE |
|-----------------------|--|------|--------------|
| PATENT INFORMATION: | US 6030960 | | 20000229 |
| APPLICATION INFO.: | US 1998-102308 | | 19980622 (9) |
| RELATED APPLN. INFO.: | Division of Ser. No. US 1995-465947, filed on 6 Jun 1995, now patented, Pat. No. US 5770584 which is a continuation-in-part of Ser. No. US 1993-74943, filed on 10 Jun 1993, now abandoned | | |
| DOCUMENT TYPE: | Utility | | |
| FILE SEGMENT: | Granted | | |

PRIMARY EXAMINER: Wilson, James O.
 LEGAL REPRESENTATIVE: Akin, Gump, Strauss, Hauer & Feld, L.L.P.
 NUMBER OF CLAIMS: 44
 EXEMPLARY CLAIM: 1
 NUMBER OF DRAWINGS: 1 Drawing Figure(s); 1 Drawing Page(s)
 LINE COUNT: 1631

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A method of treating hepatitis virus infection is disclosed.
 The method comprising administering to a human subject in need of such treatment an effective hepatitis virus-combatting amount of an alkyl lipid or alkyl lipid derivative.

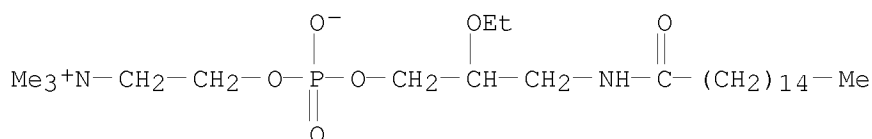
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 112989-01-2P 112989-02-3P

(preparation of phospholipids for combating hepatitis B virus)

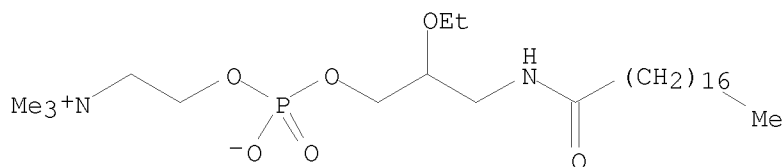
RN 112989-01-2 USPTAFULL

CN 3,5-Dioxa-9-aza-4-phosphapentacosan-1-aminium, 7-ethoxy-4-hydroxy-N,N,N-trimethyl-10-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



RN 112989-02-3 USPTAFULL

CN 3,5-Dioxa-9-aza-4-phosphaheptacosan-1-aminium, 7-ethoxy-4-hydroxy-N,N,N-trimethyl-10-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



L4 ANSWER 22 OF 23 USPTAFULL on STN

ACCESSION NUMBER: 1999:121339 USPTAFULL

TITLE: Lipid analogs for treating viral infections

INVENTOR(S): Kucera, Louis S., Pfafftown, NC, United States
 Morris-Natschke, Susan L., Apex, NC, United States
 Ishaq, Khalid S., Chapel Hill, NC, United States

PATENT ASSIGNEE(S): Wake Forest University, Winston-Salem, NC, United States (U.S. corporation)

| | NUMBER | KIND | DATE |
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| PATENT INFORMATION: | US 5962437 | | 19991005 |
| | WO 9606620 | | 19960307 |
| APPLICATION INFO.: | US 1997-793470 | | 19970502 (8) |
| | WO 1995-US10111 | | 19950807 |
| | | | 19970502 PCT 371 date |
| | | | 19970502 PCT 102(e) date |
| RELATED APPLN. INFO.: | Continuation of Ser. No. US 1994-314901, filed on 29 Sep 1994, now abandoned which is a continuation-in-part of Ser. No. US 1994-297416, filed on 29 Aug 1994, now abandoned | | |

DOCUMENT TYPE: Utility
 FILE SEGMENT: Granted
 PRIMARY EXAMINER: Raymond, Richard L.
 ASSISTANT EXAMINER: Coleman, Brenda
 LEGAL REPRESENTATIVE: Schwegman, Lundberg, Woessner & Kluth, P.A.
 NUMBER OF CLAIMS: 33
 EXEMPLARY CLAIM: 1
 LINE COUNT: 1159

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A method of treating viral infections, and in particular HIV-1, hepatitis B virus and herpes viruses, is disclosed.
 The method comprising administering to a subject in need of such treatment an infection-combating amount of a phospholipid or phospholipid derivative.

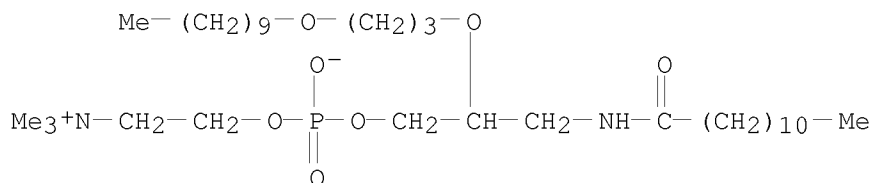
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 178172-98-0 178172-99-1 178173-00-7
 178173-01-8

(phospholipids for treating viral infections and tumors)

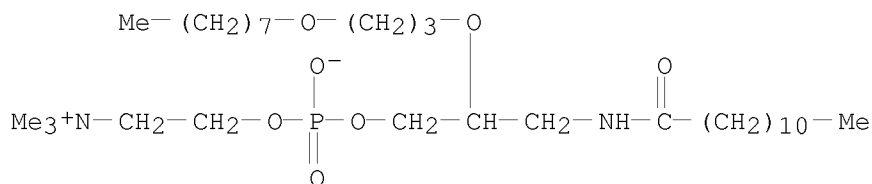
RN 178172-98-0 USPATFULL

CN 3,5-Dioxa-9-aza-4-phosphaheneicosan-1-aminium, 7-[3-(decyloxy)propoxy]-4-hydroxy-N,N,N-trimethyl-10-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



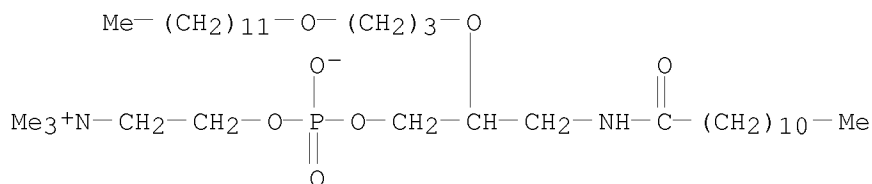
RN 178172-99-1 USPATFULL

CN 3,5-Dioxa-9-aza-4-phosphaheneicosan-1-aminium, 4-hydroxy-N,N,N-trimethyl-7-[3-(octyloxy)propoxy]-10-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)

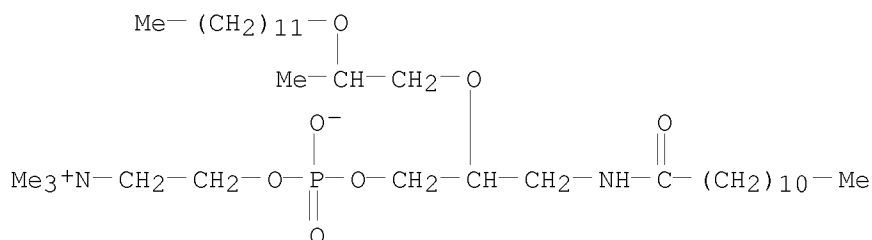


RN 178173-00-7 USPATFULL

CN 3,5-Dioxa-9-aza-4-phosphaheneicosan-1-aminium, 7-[3-(dodecyloxy)propoxy]-4-hydroxy-N,N,N-trimethyl-10-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



RN 178173-01-8 USPATFULL
 CN 3,5-Dioxa-9-aza-4-phosphaheneicosan-1-aminium, 7-[2-(dodecyloxy)propoxy]-4-hydroxy-N,N,N-trimethyl-10-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



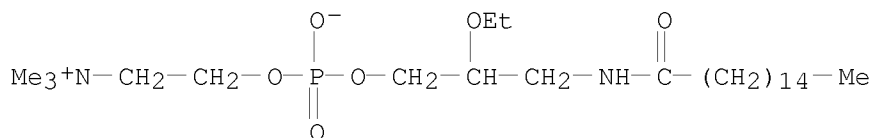
L4 ANSWER 23 OF 23 USPATFULL on STN
 ACCESSION NUMBER: 1998:72609 USPATFULL
 TITLE: Method of treating hepatitis virus infections
 INVENTOR(S): Kucera, Louis S., Pfafftown, NC, United States
 Morris-Natschke, Susan L., Apex, NC, United States
 PATENT ASSIGNEE(S): Wake Forest University, Winston-Salem, NC, United States (U.S. corporation)
 University of North Carolina, Chapel Hill, NC, United States (U.S. corporation)

| | NUMBER | KIND | DATE |
|-----------------------|---|-------|--------------|
| | ----- | ----- | ----- |
| PATENT INFORMATION: | US 5770584 | | 19980623 |
| APPLICATION INFO.: | US 1995-465947 | | 19950606 (8) |
| RELATED APPLN. INFO.: | Continuation-in-part of Ser. No. US 1993-74943, filed on 10 Jun 1993, now abandoned | | |
| DOCUMENT TYPE: | Utility | | |
| FILE SEGMENT: | Granted | | |
| PRIMARY EXAMINER: | Wilson, James O. | | |
| LEGAL REPRESENTATIVE: | Schwegman, Lundberg, Woessner & Kluth, P.A. | | |
| NUMBER OF CLAIMS: | 14 | | |
| EXEMPLARY CLAIM: | 1 | | |
| NUMBER OF DRAWINGS: | 1 Drawing Figure(s); 1 Drawing Page(s) | | |
| LINE COUNT: | 1527 | | |

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
 AB A method of treating hepatitis virus infection is disclosed.
 The method comprising administering to a human subject in need of such treatment an effective hepatitis virus-combatting amount of an alkyl lipid or alkyl lipid derivative.

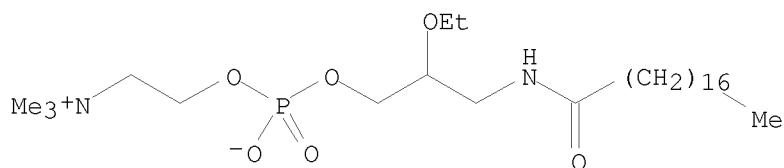
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
 IT 112989-01-2P 112989-02-3P 209532-02-5P
 209532-03-6P
 (alkyl lipids for treating hepatitis virus infections)
 RN 112989-01-2 USPATFULL

CN 3,5-Dioxa-9-aza-4-phosphapentacosan-1-aminium, 7-ethoxy-4-hydroxy-N,N,N-trimethyl-10-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



RN 112989-02-3 USPATFULL

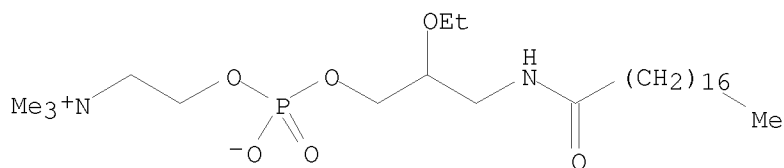
CN 3,5-Dioxa-9-aza-4-phosphaheptacosan-1-aminium, 7-ethoxy-4-hydroxy-N,N,N-trimethyl-10-oxo-, inner salt, 4-oxide (9CI) (CA INDEX NAME)



RN 209532-02-5 USPATFULL

CN 3,5-Dioxa-9-aza-4-phosphaheptacosan-1-aminium, 7-ethoxy-4-hydroxy-N,N,N-trimethyl-10-oxo-, inner salt, 4-oxide, (+)- (9CI) (CA INDEX NAME)

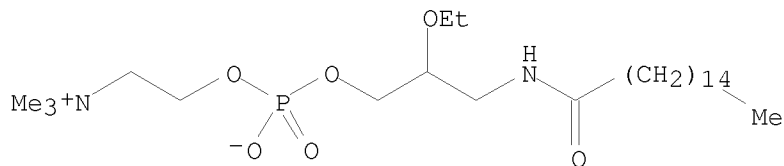
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RN 209532-03-6 USPATFULL

CN 3,5-Dioxa-9-aza-4-phosphapentacosan-1-aminium, 7-ethoxy-4-hydroxy-N,N,N-trimethyl-10-oxo-, inner salt, 4-oxide, (+)- (9CI) (CA INDEX NAME)

Rotation (+).



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L2 70 S L1 FULL

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L3 48 S L2
L4 23 S L3 AND ?VIRUS?
L5 127186 S L4 AND CORONAVIRUS OR HERPES OR TOGAVIRUS
L6 12 S L4 AND (CORONAVIRUS OR HERPES OR TOGAVIRUS)

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---Logging off of STN---

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Executing the logoff script...

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| COST IN U.S. DOLLARS | SINCE FILE | TOTAL |
| | ENTRY | SESSION |
| FULL ESTIMATED COST | 224.29 | 402.86 |
| DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS) | SINCE FILE | TOTAL |
| | ENTRY | SESSION |
| CA SUBSCRIBER PRICE | -11.20 | -11.20 |

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